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TRANSACTIONS
OF THE
HISTORIC SOCIETY
OF
LANCASHIRE AND CHESHIRE.

VOLUME X.

SESSION 1857-58.

LONDON:
J. H. PARKER, 377, STRAND.

1858.



LIVERPOOL:

T. BRAKELL, PRINTER, COOK STREET.

This Volume has been edited by the Assistant Secretary, under the direction of the Council. The writers of Papers, however, are alone responsible for the facts and opinions contained in their respective communications.

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EXPLANATORY NOTE.

Plates I, II, IV, V, VI and VII have been prepared by direction of the Council, at the expense of the Society, as have also plates IX and X, from photographs taken by Mr. Cauty.

Plate III was lent by Mr. Rundell, by whom it was engraved; plate IX by Mr. Towson; eleven of the wood engravings illustrative of Mr. Scharf's Paper were lent by Mr. Murray of Albemarle Street; seven others by the Messrs. Day of Gate Street; and the remaining one by Messrs. Bosworth and Harrison of Regent Street, London.

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Vice-Presidents.

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The HIGH SHERIFF OF CHESHIRE.

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Assistant Secretary.

J. H. GENN, Esq.

* In accordance with Law XX, the Council added the three elected Vice-Presidents to all the Sectional Committees.

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LIST OF MEMBERS.

SESSION X, 1857-8.

The first List was dated 23rd November, 1848; all whose names appeared in it, are therefore Original Members. Those who have been enrolled as Mayors or Sheriffs have their year of office attached.

The letter P denotes that the Members in connexion with whose names it occurs, have read Papers before the Society.

Those whose names are printed in SMALL CAPITALS are Members of the Council; and in *italics* are Life Members.

Those marked thus * are Resident. The post town Liverpool is usually omitted.

A

- 23rd Nov., 1848. *Ainslie, Montague*, Grizedale, Hawkshead, Lancashire.
6th Dec., 1855. *Allcard, William*, 43, Upper Brooke street, Grosvenor square, London.
18th Sept., 1854. *Allport, William, 11, Dale street.
10th Feb., 1853. *Anderson, Robert Worrall, 23, Falkner square.
17th Dec., 1857. *Anderson, Thomas Darnley, 5, India buildings, Water street, and 37, Northumberland terrace, Everton.
3rd May, 1849. *Anderson, Thomas Francis, Holly lodge, Fairfield, and 3, Cable street.
4th Dec., 1856. Ansdell, John, St. Helens.
23rd Nov., 1848. Ansdell, Richard, 7, Victoria road, Kensington, London.
15th Sept., 1854. Arrowsmith, P. R., The Ferns, Bolton.
P. 11th May, 1854. Aspland, Rev. R. Brook, M.A., Dukinfield, Ashton-under-Lyne.
14th Dec., 1848. *Astley, John, Worrall buildings, 11, New Wapping, and Rock Ferry, Cheshire.
P. 9th Oct., 1854. Atherton, Henry, Sutton, Prescott.
15th April, 1858. *Atherton, John, 33, Manchester street.
8th Nov., 1849. Atkinson, Fenton Robinson, Oak house, Pendleton, Manchester.
H. Sh. Cheshire, 1857. *Atkinson, William*, Ashton hayes, Chester.
23rd Nov., 1848. *AVISON, THOMAS, F.S.A., Fulwood park, Aigburth, and 18, Cook street, TREASURER.
15th April, 1858. *Ayrton, Francis, Chatham street.

B

- 23rd Nov., 1848. *Badnall, Rev. William, M.A., Wavertree.
P. 23rd Nov., 1848. Baines, Thomas, Parliament street, Westminster.
15th April, 1858. *Banner, Rev. T. B., Orphan School, Myrtle street.

- 8th June, 1854. *Banning, John Johnson, 20, Castle street.
 Mayor Man., 1851-53. Barnes, Robert, Brookside, Manchester.
 15th April, 1858. Bath, Henry, Longlands, Swansea.
 7th Jan., 1858. *Batten, Charles, 87, Lord street, and 74, Chatham street.
 P. 6th Dec., 1849. Beamont, William, Warrington.
 21st May, 1857. *Bean, Edwin, Revenue buildings.
 30th Dec., 1854. *BEAN, WILLIAM, Revenue buildings, and 56, Berkeley street.
 10th Sept., 1854. *Bedford, James, Ph.D.
 15th April, 1858. *Bell, Christopher, Back Goree.
 23rd Nov., 1848. *Bell, Henry, 16, North John street, and Grosvenor road, Claughton, Birkenhead.
 6th April, 1854. Bell, John Gray, 11, Oxford street, Manchester.
 15th Nov., 1854. *Belshaw, John, Wason buildings, 4, Harrington street.
 P. 9th Dec., 1852. Benn, Edward, Ballymena, Ireland.
 23rd Nov., 1848. *Bennett, William, Sir Thomas' buildings, and 109, Shaw street.
 3rd Dec., 1857. *Berry, Percival, 7, Union court.
 15th April, 1858. *Berry, J. R., James street.
 15th April, 1858. *Bewley, A. R., Temple court.
 7th March, 1850. Birch, Sir Thomas Bernard, Bart., The Hazles, Prescott.
 23rd Nov., 1848. Birchall, Thomas, Ribbleton hall, Preston.
 23rd Nov., 1848. *Bird, William, 9, South Castle street, and Wood Hey, Spittal.
 4th March, 1852. Birley, Rev. John Shepherd, Halliwell hall, Preston.
 P. 8th Jan., 1852. Birley, T. Langton, Carr hall, Kirkham.
 6th Dec., 1855. Black, J., M.D., F.G.S., 2, George's square, Edinburgh.
 20th Sept., 1854. *BLACKMORE, WILLIAM, 1, Exchange street West, and Sutton, Cheshire.
 23rd Nov., 1848. Blackburne, John Ireland, The Hall, Hale.
 26th Sept., 1854. Bloxham, Frederick William, Alliance bank, Thread-needle street, London.
 23rd Nov., 1848. *Blundell, Thomas Weld, Ince Blundell, Great Crosby.
 P. 30th Dec., 1854. Bööck, Frederick Robert Paul, 86, Newman street, Oxford street, London.
 5th May, 1853. Booth, Benjamin Witham, Swinton, Manchester.
 1st May, 1856. Booth, John Billington, Preston.
 15th Dec., 1853. Bossi, Arthur, Paris.
 31st Sept., 1854. Bostock, Rev. H., M.A., Grammar school, Warrington.
 3rd Jan., 1856. *Bouch, Thomas, 1, Oldhall street, and New Brighton.
 23rd Nov., 1848. *Boult, Francis, Rumford place, and Devonshire road, Claughton.
 P. 23rd Nov., 1848. *Boult, Joseph, North John street, and Parkfield road, Aigburth road.
 8th Dec., 1851. Bourne, Cornelius, Stalmine hall, Preston.
 15th April, 1858. *Bowers, Anthony, Vauxhall foundry.
 6th Dec., 1855. Bowes, John, Blue Coat School, Warrington.
 13th Nov., 1851. Brackstone, R. H., Lyncombe hill, Bath.
 15th Dec., 1853. Bradbury, Charles, Salford crescent, Manchester.
 17th Dec., 1857. *Bradley, Thomas, Bold street, and 18, Kenyon terrace, Birkenhead.
 17th Dec., 1857. *Bradley, William Gibson, Bold street, and 18, Kenyon terrace, Birkenhead.

- 23rd Nov., 1848. *Brakell, Thomas, 7, Cook street, and 23, Richmond terrace, Everton.
- 30th Dec., 1854. Brent, Francis, Custom house, Southampton.
- 9th March, 1854. *BRIGHT, HENRY ARTHUR, B.A., Sandheys, West Derby, and 1, North John street.
- 3rd May, 1849. Brooke, Henry, Forest hill, Northwich.
- 6th March, 1851. *Brooke, Richard, jun.*, Norton priory, Runcorn.
- 13th Sept., 1854. *Brounlie, Charles, 19, Tower chambers.
- 4th Dec., 1856. Broughton, Frederick, Ulster railway, Belfast.
- 6th Jan., 1853. *Brown, Rev. Hugh Stowell, 118, Chatham street.
- 23rd Sept., 1854. *Brown, John*, F.R.G.S., F.R.S. North. Antiq. Copenhagen, 3, Newcastle place, Clerkenwell, London.
- 15th April, 1858. Brown, Thomas, near Whitehaven.
- 23rd Nov., 1848. **Brown, William*, M.P., 7, Chapel street, and Fenton's hotel, London.
- 15th March, 1855. *BROWNE, G. MANSFIELD, 15, South hill, Park road.
- 15th April, 1858. *Burgess, Adam, South John street.
- 11th Sept., 1854. *BURKE, WILLIAM, 160, Grove street.
- 17th Sept., 1854. Burnell, Rev. Samuel, M.A., Winwick, Warrington.
- Mayor La., 1853-4. Burrell, John Stamp, Lancaster.
- 9th Dec., 1852. Bury, Edward, F.R.S., Croft lodge, Ambleside.
- p. 15th Dec., 1853. *BUXTON, DAVID, M.R.S.L., Principal of the Liverpool Deaf and Dumb Institution, Oxford street.
- 2nd Nov., 1854. Buxton, Edward, Principal of the Cambrian Deaf and Dumb Institution, Swansea.

C

- 23rd Nov., 1848. *Caine, Nathaniel, 12, Dutton street.
- 3rd Dec., 1857. *Calder, Rev. William, M.A., Fairfield, Liverpool.
- 6th Dec., 1855. Calvert, F. Crace, F.C.S., M.R.A. Turin, Royal Institution, Manchester.
- 23rd Nov., 1848. *Campbell, Rev. Augustus, M.A., The Vicarage, Childwall, and 131, Duke street.
- 18th Dec., 1856. *Campbell, Captain William, R.L.A., North Battery.
- 4th April, 1850. *Carlisle, The Earl of*, Castle Howard, Northumberland.
- 5th March, 1857. *Carr, Thomas, Lower Bebington, Cheshire.
- 18th Dec., 1856. Cartwright, Samuel, Bushell place, Preston.
- 6th Dec., 1849. *Casson, William, 39, Parliament street, and 3, Great George square.
- 27th Sept., 1854. *Casey, George, Naylor street, and Walton.
- 26th Sept., 1854. *Cauty, Henry John, 31, Norton street.
- 3rd Dec., 1857. *Chadburn, Charles Henry, 71, Lord street, and Egremont, Birkenhead.
- 15th April, 1858. *Chaloner, Thomas, 26, North John street, and College street South.
- 14th Sept., 1854. *Chantrell, G. F., 150, Dale street.
- H. Sh. Chesh., 1855-6. *Chapman, John*, Hill End, Mottram-in-Longdendale.
- 21st May, 1857. Cheetham, John, M.P., Eastwood, Stalybridge.
- CHESHIRE, THE HIGH SHERIFF OF, VICE-PRESIDENT, *ex officio*. (George Fortescue Wilbraham, Esq., Delamere Lodge, Cheshire.)
- 2nd June, 1853. *Chester, The Lord Bishop of*, The Palace, Chester.
- 23rd Nov., 1848. *Clare, John Leigh, Richmond terrace, Breck road, and 11, Exchange buildings.

- 21st May, 1857. *Clint, Francis A., 14, Dale street, and 2, Beech terrace.
 17th Dec., 1857. Coates, Rev. W. H., West Kirby, Cheshire.
 10th Nov., 1854. Colston, Rev. John, Quarry bank, Wilmslow, Cheshire.
 24th May, 1855. *Comber, Thomas, 33, Edge lane.
 23rd Nov., 1848. *Conway, John, Cable street.
 15th April, 1858. *Cooke, A., 8, Temple court.
 15th April, 1858. *Cooke, Robert, Liscard.
 P. 15th April, 1858. *Corey, Charles, 5, Slater street.
 8th Sept., 1854. *Cornish, Thomas, Revenue buildings.
 18th Dec., 1856. Corser, Rev. Thomas, M.A., Stand, Manchester.
 23rd Nov., 1848. Coulthart, John Ross, F.S.A. Scot., Croft house,
 Ashton-under-Lyne.
 11th Dec., 1856. Cranage, Edward, Ph.D., Old hall, Wellington, Salop.
 21st May, 1857. *Cresswell, Right Hon. Sir Cresswell*, 21, Prince's gate,
 London, and Fleming house, Old Brompton,
 Middlesex.
 4th Dec., 1856. Crory, William G., Belfast.
 6th Dec., 1849. *Crosfield, Henry, 4, Temple place, and Edge mount,
 Edge lane.
 6th Dec., 1855. *Cross, James L., 6, Sandon terrace, and Castle street.
 1st Mar., 1855. Crosse, John Norman, F.S.S.
 23rd Nov., 1848. Crosse, Thomas Bright, Shawe hill, Chorley.
 2nd May, 1850. Crossley, James, F.S.A., President of the Chetham
 Society, Booth street, Piccadilly, Manchester.
 26th Nov., 1856. Croxton, Thomas, Blue Coat School, Oldham.
 P. 23rd Nov., 1848. *CUST, MAJOR-GEN. THE HON. SIR EDWARD, K.C.H.,
 D.C.L., F.R.S., Leasowe Castle, Cheshire, Clare-
 mont, Surrey, and Hill street, London, PRESIDENT.

D

- 8th Dec., 1851. Dale, Rev. Peter Steele, M.A., Mytholme lodge,
 Hollins green, Warrington.
 8th Dec., 1851. *Dale, Robert N., Exchange court, Exchange street East.
 P. 2th Dec., 1851. *DANSON, JOHN TOWNE, F.S.S., Eldon chambers, South
 John street, and the Grove, Woodchurch road,
 Birkenhead, VICE-PRESIDENT.
 23rd Sept., 1854. *Davies, Comenius, 134, Paddington, Edge Hill.
 15th April, 1858. *Davies, William, Lyceum place, Bold street, and
 Ladycroft cottage, Huyton.
 6th Mar., 1856. Daw, Robert, F.B.S.E., &c., Custom house, Plymouth.
 P. 23rd Nov., 1848. Dawes, Matthew, F.S.A., F.G.S., Westbrooke, Bolton.
 10th Feb., 1853. Dawson, Pudsey, Hornby castle, Lancashire.
 23rd Nov., 1848. **Dawson, Henry*, 30, Redcross street, and 14, St. James'
 road.
 2nd May, 1850. *DAWSON, THOMAS, Rodney street.
 23rd Nov., 1848. Dearden, James, F.S.A., Rochdale Manor, Lancashire,
 and Upton house, Poole.
 6th April, 1850. De Tabley, The Lord, Tabley hall, Cheshire.
 23rd April, 1857. *Devonshire, The Duke of*, D.C.L., F.R.S., Chatsworth,
 Derbyshire, and Devonshire house, London.
 7th May, 1851. **Dickinson, Joseph*, M.A., M.D., F.R.S., F.L.S., M.R.I.A.,
 Bedford street.
 P. 20th Dec., 1855. Dobson, William, Chronicle office, Preston.

- 10th Dec., 1857. *Donbavand, Benjamin, 5, Chatsworth street, Edge Hill.
 P. 7th March, 1853. *Dove, Percy M., F.S.S., F.I.A., Royal Insurance Office, 1, North John street, and 49, Hamilton square, Birkenhead.
 4th Dec., 1856. *Driffield, Walter Wren, York buildings, Sweeting st.
 23rd Nov., 1848. *Duarte, Ricardo Thomaz, 2, Royal Bank buildings.
 13th Sept., 1854. *Duncan, Thomas, 18, West Derby street.
 23rd Nov., 1848. *Dunlevie, Charles Thomas, Fenwick Chambers, 8, Fenwick street.

E

- 1st Jan., 1857. *Eaton, Francis James, Eaton villa, Richmond terrace, Breck road, and 7, Exchange chambers.
 9th Dec., 1852. Eckersley, Thomas, Wigan.
 15th April, 1858. *Eden, James, Park field.
 25th Sept., 1854. *Edmondson, Henry, 200, Bootle lane.
 P. 23rd Nov., 1848. *Egerton, Sir Philip de Malpas Grey*, Bart., M.P., F.R.S., F.G.S., Oulton park, Tarporley.
 7th Jan., 1858. Egerton, Wilbraham, Rostherne hall, Knutsford.
 6th April, 1850. *Ellesmere, The Earl of*, Worsley hall, Manchester, and Bridgewater house, London
 3rd Mar., 1852. *Ellis, William, 28, Kensington.
 23rd Nov., 1848. *Evans, Edward, 52A, Hanover street.
 15th Sept., 1854. *Evans, H. Sugden, F.C.S., 52A, Hanover street.
 4th Dec., 1856. **Evans, Robert*, Eldon grove, Rock Ferry.
 8th Nov., 1849. *Evans, Thomas Bickerton, 52A, Hanover street.
 23rd Nov., 1848. *Ewart, Joseph Christopher, M.P., 64, Pall Mall, London, and New Brighton.
 6th May, 1852. *Ewart, William*, M.P., 6, Cambridge square, Hyde park, London.
 7th Feb., 1850. Eyton, Peter Ellis, Town hall, Flint.

F

- 3rd Dec., 1857. Fairbairn, William, F.R.S., Manchester.
 15th April, 1858. Fawcett, John, Ashton-under-Lyne.
 23rd Nov., 1848. Feilden, John, Mollington hall, Chester.
 11th Sept., 1854. Ferguson, William, F.L.S., F.G.S., F.R.G.S., 31, Torrington square, London.
 23rd Nov., 1848. *Finlay, William, Collegiate Institution.
 23rd Nov., 1848. *Fisher, William M., Ph.D., F.R.A.S., Upper Parliament street.
 6th Dec., 1849. *Fleming, Thomas, 22, Sandon street, and 58, Castle street.
 15th April, 1858. *Foard, J. T., Church street.
 15th April, 1858. *Forrest, J. A., Lime street.
 5th Dec., 1850. *Forster, Wilson, New ferry terrace, Rock ferry, and 36, Dale street.
 23rd Sept., 1854. *Forwood, T. B., 33, North John street.
 15th April, 1858. Fowler, C., Torquay, Devon.
 7th May, 1857. **Frackelton, Rev. S. S.*, M.A., All Souls', Liverpool.
 15th Dec., 1853. Franks, Augustus Wollaston, M.A., F.S.A., British Museum, London.

- 6th Jan., 1853. *French, Gilbert James*, Corr. Mem. S.A. Scot., Bolton.
 7th Jan., 1858. **Frost*, Meadows, Exchange alley West, and Chester.

G

- 14th Dec., 1848. **Gardner*, Richard Cardwell, Colonial buildings, 34, Dale street, and Newsham house.
 15th Dec., 1853. **Gardner*, Rev. Thomas, M.A., Stanley.
 31st Oct., 1854. *Garner*, James Pepper, Queen street, Cheapside, London.
 3rd May, 1849. *Garnett*, Wm. Jas., M.P., Bleasdale tower, Garstang.
 23rd Nov., 1848. **Gaskell*, John Rooth, Exchange court, Exchange street East.
 7th Feb., 1850. **Gath*, Samuel, 45, Shaw street, Everton.
 18th Dec., 1856. **Gerard*, Henry, 10, Rumford place.
 P. 20th Nov., 1856. **GIBSON*, A. CRAIG, Lower Bebington, Birkenhead.
 7th Mar., 1850. **Gill*, Robert, 1, Chapel street, and Much Woolton.
 3rd Dec., 1857. *Gleadowe*, Rev. R. W., M.A., Neston Vicarage, Cheshire.
 15th April, 1858. **Glover*, John, 26, Hanover street.
 9th Dec., 1852. *Graves*, Samuel Robert, 13, Redcross street.
 7th Feb., 1850. **Gray*, John, 16, St. Clement's terrace, Windsor, and 25, Strand street.
 21st Sept., 1854. *Gray*, Rev. R. H., M.A., Kirkby, Prescott.
 14th Dec., 1848. *Gray*, Thomas, Manager and Secretary, Unity Insurance Office, London.
 6th Feb., 1851. *Gray*, William, M.P., Wheatfield, Bolton.
 P. 20th Dec., 1855. **GRAZEBROCK*, GEORGE, F.S.A., 40, Canning street.
 7th Feb., 1850. **Green*, Robert Molyneux, 14, Rupert lane, Everton.
 16th Sept., 1854. **Green*, Thomas, 34, Chapel street.
 23rd Nov., 1848. *Greenall*, Rev. Richard, M.A., Incumbent of Stretton, R.D., Stretton, Warrington.
 23rd Sept., 1854. *Greene*, John Stock Turner, Myddleton Hall, Warrington.
 31st Aug., 1854. *Grenside*, Rev. William Bent, M.A., Melling Vicarage, Lancaster.
 19th Mar., 1857. **Grimmer*, W. Henry, 6, Castle street.
 3rd Dec., 1857. *Grosvenor*, Rev. Francis, M.A., St. John's, Chester.
 15th April, 1858. *Gulliver*, T. O., Swansea.
 8th Nov., 1849. **Guyton*, Joseph, 163, Falkner terrace, Upper Parliament street.

H

- 20th Sept., 1854. *Hadwen*, Joseph, Fairfield, near Manchester.
 4th Dec., 1856. **Hains*, Rev. Phillip F. J. Bird, St. Matthias's, Liverpool.
 21st May, 1857. **Hall*, Charlton, R., 40, Everton terrace.
 Mayor La., 1852-53. *Hall*, John, Lancaster.
 2nd May, 1850. **Hall*, William, Seaforth.
 8th Dec., 1851. **Hammond*, William John, 168, Brownlow hill.
 23rd Nov., 1848. *Hampton*, Rev. H., M.A., 3, Lowther Cottages, Holloway, London.
 10th Dec., 1857. **Hancock*, Thomas S., Birkenhead.
 15th April, 1858. **Harding*, J., Revenue buildings, and Ashfield house, Holt hill, Birkenhead.

- 30th Dec., 1854. *Hardman, J. W., B.A., South Hill place.
 P. 6th Mar., 1856. Hardwick, Charles, Preston.
 P. 8th Nov., 1849. Harland, John, F.S.A., Guardian Office, Manchester.
 5th May, 1853. Harrison, William, Rock mount, St. John's, Isle of Man.
 12th Jan., 1854. *Harrison, William*, F.G.S., &c., Galligreaves House, Blackburn.
 9th Dec., 1852. *Harrison, Henry Walter, 27, Castle street.
 9th Feb., 1854. *Harrowby, The Earl of*, D.C.L., F.R.S., Sandon hall, Staffordshire, and 39, Grovesnor square, London.
 23rd April, 1857. *Hartington, The Marquess of*, M.P., Chatsworth, Derbyshire, and Devonshire house, London.
 10th Feb., 1853. *Hartley, Jesse, Derby road, Bootle, and Dock Yard.
 10th Feb., 1853. **Hartley, John Bernard*, Bedford street South, and Dock Yard.
 P. 11th Oct., 1854. *HARTNUP, J., F.R.A.S., Observatory.
 23rd Nov., 1848. Hawkins, Edward, F.R.S., V.P.S.A., F.L.S., British Museum, London.
 22nd Sept., 1854. *Hawthorne, Nathaniel, U.S. Consulate.
 3rd May, 1849. *Hay, John, 2, Cable street, and Parkfield Cottage, Birkenhead, Cheshire.
 27th Sept., 1854. *Healey, Samuel R., 48, Castle street, and Westbank, Woolton.
 23rd Nov., 1848. *HEATH, EDWARD, Orange court, Castle street, and St. Domingo grove, Everton, VICE-PRESIDENT.
 24th Oct., 1854. Heginbottom, George, Albert terrace, Ashton-under-Lyne.
 11th May, 1854. Henderson, Ebenezer, LL.D., Greenbank, St. Helens.
 8th May, 1856. *Henderson, William, 41, Church street.
 23rd Nov., 1848. *Herdman, William Gawin, West Villa, St. Domingo vale, Everton.
 23rd Nov., 1848. *Heywood, James*, F.R.S., F.S.A., F.G.S., Headlands, Prestwich, Manchester.
 23rd Nov., 1848. *Heywood, Sir Benjamin*, Bart., F.R.S., F.S.S., Claremont, Manchester.
 P. 23rd Nov., 1848. *Heywood, Thomas*, F.S.A., Hope end, Ledbury, Herefordshire.
 3rd April, 1856. Hibbert Joseph, Brookbank, Hyde, Cheshire.
 P. 4th Jan., 1849. Hibbert, Thomas Dorning, Middle Temple, London.
 15th April, 1858. Hickson, John, Stanton-by-Dale, near Landsacre, Derbyshire.
 P. 23rd Nov., 1848. Higgin, Edward, Sweeting street, Liverpool.
 6th Dec., 1849. *Higgin, Thomas, Tower Chambers.
 P. 12th Sep., 1854. Higgins, Rev. H. H., M.A., Asylum, Rainhill.
 P. 23rd Nov., 1848. Hill, Rev. John Wilbraham, M.A., Waverton, Cheshire.
 21st Sep., 1854. *Hill, Samuel, 11, Lower Castle street.
 26th April, 1855. Hinde, Rev. Edmund, M.A.
 P. 8th Dec., 1851. Hinde, John Hodgson, 9, Savile Row, Newcastle-on-Tyne, and Acton house, Felton, Northumberland.
 11th May, 1854. *Hindley, Edward, 34, Exchange street East.
 18th Sep., 1854. *Hindley, Rev. Hugh Johnson, S.C.L., St. George's, Everton.
 23rd Sep., 1854. *Hindmarsh, Fred.*, F.G.S., F.R.G.S., Bucklersbury, London.
 16th Sep., 1854. *Hodson, Thomas L., 39, Islington.

- 18th Dec., 1856. *Holden, Thomas*, Summerfield, Bolton.
 24th Sep., 1854. **Holt, William D.*, 23, Edge Hill.
 26th Sep., 1854. **Hore, Edmund Joseph*, 6, George's Dock Gates.
 21st May, 1857. **Hornblower Lewis*, Clarendon buildings, South John street.
 20th Sep., 1855. **Horner, Francis*, 33, Everton road.
 7th May, 1857. **Horner, W.*, 34, South Castle street, and Eldon house, Oton.
 23rd Nov., 1848. **Horsfall, Thomas Berry, M.P.*, Mill Bank, West Derby.
 14th April, 1853. **Houghton, Richard H., Jun.*, Sandheys, Waterloo.
 4th Dec., 1856. **Howell, Edward*, Church street
 P. 8th Nov., 1849. **HOWSON, REV. JOHN SAUL, M.A.*, Principal of the Collegiate Institution, VICE-PRESIDENT.
 Mayor La., 1849-50. *Howitt, Thomas*, Lancaster.
 27th Sep., 1854. **Hubback, Joseph*, 27, Lower Castle street, & Aigburth.
 10th Dec., 1857. **Hughes, John R.*, Laverock bank, Toxteth Park.
 14th Sep., 1854. **Hughes, Joseph*, 2, Upper Duke street, and 9, Brownlow hill.
 16th Sep., 1854. **Hughes, J. B.* 77, Mill street.
 6th April, 1854. *Hughes, Thomas*, 4, Paradise row, Chester.
 8th Feb., 1852. *Hulton, William Adams*, Hurst Grange, Preston.
 Mayor C., 1851-2. *Humbertson, Phillip* Stapleton, Chester.
 P. 23rd Nov., 1848. **HUME, REV. ABRAHAM, D.C.L., LL.D., F.S.A.*, Corr. Mem. S.A. Scot., 24, Clarence street, Everton, HON. SECRETARY.
 21st May, 1857. *Hume, Hamilton*, Cooma, Yass, New South Wales.
 9th Feb., 1854. **Hunt Alfred W.*, B.A., 31, Oxford street.
 9th Dec., 1852. **Hutchison, Robert*, 12, Sweeting street, and 6, Canning street.

I

- 9th Oct., 1854. *Ingham, Rev. Thomas Barker, M.A.*, Rainhill.
 15th April, 1858. **Isaac, J. R.*, Castle street.

J

- 1st April, 1852. **JACOB, JOHN GIBBORN*, 56, Church street.
 23rd Nov., 1848. *JACSON, Charles R.*, Barton Lodge, Preston.
 15th April, 1858. **Jago, J. R.*, Upper Huskisson street.
 21st May, 1857. **Jeffery, James Redcliffe*, 43, Church street, and 11, Lodge lane.
 23rd Nov., 1854. **Jeffery, William R.*, 8, Montpelier terrace, Upper Parliament street.
 18th Sep., 1854. **Johnson, Henry*, Walton.
 23rd Nov., 1848. **Johnson, John H.*, 7, Church street.
 15th April, 1858. **Jones, Charles*, Bridge street, Birkenhead.
 11th Dec., 1856. *Jones, W. Hope*, Hooton, Cheshire.
 23rd Nov., 1848. **Jones, Alfred*, 17, Goree Piazzas.
 15th April, 1858. **Jones, Daniel*, 2, Tarleton street.
 23rd Sep., 1854. *Jones, Edward*, The Larches, Handsworth.
 3rd May, 1849. **Jones, Morris Charles*, 75, Shaw street.
 6th Dec., 1849. **Jones, Roger Lyon*, 1, Great George square.
 15th Sep., 1854. *Jones, Thomas, B.A.*, Chetham Library, Manchester.
 18th Dec., 1856. **Juncker, Philip*, Monekton Lodge, Anfield, Walton.

K

- 15th April, 1858. *Keith, W , 34, Castle street.
 23rd Nov., 1848. *Kendal, Thomas, Green lane, Wavertree.
 P. 3rd May, 1849. Kendrick, James, M.D., Warrington.
 11th Dec., 1856. Kershaw, James, M.P., Oaklands, Victoria park, Manchester.
 21st May, 1857. *Kitchen, Joseph, Oak house, West Derby.

L

- 15th Dec., 1853. *Lace, William Henry, 1, Union court, Castle street, and Beaconsfield, Woolton.
 15th April, 1858. *Lafone, H., 87, Northumberland terrace, Everton, and 113, Marybone.
 14th Mar., 1852. *Lambert, David Howe, 10, Exchange chambers, Tithebarn street, and Rock Park, Rock Ferry.
 LANCASHIRE, THE HIGH SHERIFF OF, VICE-PRESIDENT, *ex-officio*. (George Marton, Esq., Capernwray Hall, Lancaster.)
 23rd Nov., 1848. Langton, William, Manchester.
 21st Sep., 1854. *Lea, James, Surveyor, Egremont, Cheshire.
 6th Dec., 1849. *Ledger, Reuben, Grove house, West Derby.
 1st April, 1852. Lee, Rev. Thomas Faulkner, M.A., Royal Grammar School, Lancaster.
 23rd Nov., 1848. Legh, G. Cornwall, M.P., High Leigh, Warrington.
 10th Dec., 1857. Leigh, Major Egerton, The West Hall, High Leigh, Warrington.
 15th April, 1858. *Leithead, H. F., Revenue buildings.
 15th April, 1858. Lewthwaite, J., Hartlepool.
 25th Sep., 1855. *Lidderdale, William, 42, Canning street.
 4th April, 1850. Lilford, The Lord, Oundle, Northamptonshire, and Grosvenor place, London.
 4th Mar., 1858. Lindsay, The Lord, Haigh Hall, Wigan.
 23rd Nov., 1848. *Lingard, Alexander Rowsand, Eastham.
 Mayor Liv., 1851-2 *Littledale, Thomas, Highfield house, and 13, Exchange buildings.
 *LIVERPOOL, THE MAYOR OF, VICE-PRESIDENT, *ex-officio*, (James Holme, Esq.)
 15th April, 1858. Lockey, Rev. F., LL.B., Swainswick, Bath.
 14th Dec., 1848. *Lloyd, John Buck, 54, Castle street, and Aigburth.
 6th Jan., 1853. *Longton, John, Breck road, and Peter's place, Rumford street.
 P. 23rd Nov., 1848. Lord, Lieut. William, R N., 8, North parade, Bath.
 23rd Nov., 1848. *Lowndes, Matthew Dobson, 7, Brunswick street, and Edge lane.
 14th April, 1853. Lyon, Thomas Henry, Appleton hall, Warrington.
 6th Dec., 1849. Lyon, Thomas, Appleton hall, Warrington.

M

- 21st Sept., 1854. *MacIlveen, Alexander, Principal of the Liverpool Institute, Sandon terrace.
 15th April, 1858. *McInnes, J., 21, Neptune street.
 P. 3rd Mar., 1853. *MACINTYRE, PETER, M.D., 128, Duke street.

- 27th Sep., 1854. *Macfie, Robert Andrew, 30, Moorfields, and Ashfield hall, Neston.
- 17th Dec., 1857. Mackie, Ivie, Manchester.
- 16th Sep., 1854. Mackreth, Rev. Thomas, B.D., Halton Rectory, Lancaster.
- 21st May, 1857. M'Nicoll, David Hudson, M.D., Southport.
- 15th April, 1858. *M'Nicoll, J., Brunswick Saw Mills.
- 23rd Nov., 1858. *M'QUIE, PETER ROBINSON, Low hill, and 14, Water street.
- 5th May, 1853. *Macrae, John Wrigley, Edge lane, and 22, Hackin's hey.
- 23rd Nov., 1848. *Macrorie, David, M.D., 126, Duke street.
- 6th Dec., 1849. *M'Vicar, Duncan, Abercromby terrace, and 7, Exchange buildings
- 3rd Jan. 1849. *Manchester, the Lord Bishop of*, Sedgley hall, Manchester.
- 23rd Nov., 1848. Markland, James Heywood, D.C.L., F.R.S., F.S.A., Bath.
- 23rd Nov., 1848 *Marsden, George, Vernon Priory, Edge Hill.
- P. 5th June, 1841. MARSH, JOHN FITCHETT, Fairfield house, Warrington.
- 1st Jan., 1857. Marshall, W., Penwortham hall, Preston.
- 9th Mar., 1854. *Mason, William Ithell, 14, Lower Hope place.
- 23rd Nov. 1848. *Mather, Daniel, 70, Mount pleasant.
- 19th Feb., 1857. *Mather, Captain R., Finch house, West Derby.
- 15th April, 1858. *Mawdsley, H., Southport.
- P. 23rd Nov. 1848. *MAYER, JOSEPH, F.S.A., M.R Asiat. S., F.E.S., F.R.S. North. Antiq. Copenhagen, Associé étranger de la Société Impériale des Antiquaires de France, Hon. Mem. SS. Antiq., Normandy, l'Ouest, and the Morini, de la Société d'Emulation d'Abbeville, &c., 68, Lord street, Hon. CURATOR.
- 17th Feb., 1850. Mayer, Samuel, Newcastle-under-Lyne.
- 24th May, 1855. Melling, Thomas, C.E., Rainhill.
- 15th April, 1858. *Mercer, Nathan, 7, Church street.
- 15th April, 1858. *Mercier, J. D., Church street.
- P. 6th Dec., 1849. Middleton, Captain James, F.S.A., Churchhurst Castle, Isle of Wight
- P. 31st Dec., 1854. *Milner, William, 322, Upper Parliament street, and Phoenix Safe Works, Windsor.
- Mayor Liv., 1848-9 *Moore, John Bramley, M.P., Hon. Mem. Archæological Association, Carioca Lodge, Aigburth, and Orange court, Castle street.
- 3rd Dec., 1857. *Moore, Rev. Richard R., B.A., 28, Rupert Lane, Everton.
- P. 8th Nov., 1849. *MOORE, REV. THOMAS, M.A., 65, Oxford street, LIBRARIAN.
- 18th Dec., 1856. Moseley, Thomas Beeby, 52, Upper Charlotte street, Fitzroy square, London.
- 15th April, 1858. *Moss, J. B., Minshull street.
- P. 23rd Nov., 1848. *Moss, Rev. John James, M.A., Upton, Cheshire.
- 7th Mar., 1850. *MOTT, ALBERT J., 21, South Castle street, & Orchard hey, Preston road, Walton.
- 18th Sep., 1854. *Mott, Charles Grey, 27, Church road, Higher Tranmere.
- 3rd Dec., 1857. *Moult, William, 21, Leigh street, and Knowsley.

- 21st May, 1857. *Mozley, Charles, 125, Mount pleasant.
 19th Sep., 1854. *Musker, Roger Melling, Walton.
 11th Dec., 1856. Myres, John James, Bank Parade, Preston.

N

- H.S. Ches, 1857. *Naylor, Richard*, Hooton, Cheshire.
 23rd Nov., 1848. *Neill, Hugh, F.R.A.S., Abercromby square.
 15th April, 1858. *Newlands, J., Public Offices, Cornwallis street.
 P. 6th Dec., 1855. *Newton, John, 15, West Derby street.
 23rd Nov., 1848. Nicholson, James, F.S.A., Thelwall hall, Warrington.
 6th Dec., 1849. North, Alfred, Salcombe hill house, Sidmouth.
 29th Sept., 1854. *Nottingham, John, M.D., 18, Roscommon street.
 13th Dec., 1854. Nuttall, Thomas, F.L.S., Nut grove, Rainhill.

O

- 2nd Jan., 1851. *Oates, Captain W. C.*, Cavendish place, Bath.
 4th Dec., 1856. *O'Donnell, John, M.D., 34, Rodney street.
 P. 6th Dec., 1849. Ormerod, George, D.C.L., F.R.S., F.S.A., F.G.S., Sedbury Park, Chepstow.
 6th Feb., 1851. Osborne, John James, Macclesfield.
 3rd Jan., 1850. *Overend, James, 55, Hope street.
 3rd Dec., 1857. *Oxley, Frederick, Acre terrace, 21, Everton brow.

P

- 23rd Nov., 1848. *Paris, Thomas Jeremiah, 68, Lord street.
 3rd Jan., 1850. *Parker, Charles Stewart, Bank chambers, Cook street.
 18th Dec., 1856. Parker, Robert Townley, Cuerden Hall, Preston.
 1st May, 1856. Parr, Rev. H., Vicarage, Taunton.
 7th Mar., 1850. *Patten, John Wilson*, M.P., Bank Hall, Warrington.
 2nd Nov., 1854. Patterson, Andrew, Principal of the Deaf and Dumb Institution, Manchester.
 9th Oct., 1854. *Peacock, John, 2, Chapel street.
 6th Dec., 1849. *Pearce, George Massie, Hacks hey and Ormskirk.
 23rd Nov., 1848. Pedder, Edward, Ashton Park, Preston.
 11th Dec., 1856. *Pedder, Henry Newsham*, Preston.
 23rd Nov., 1848. Pedder, Richard, Winckley square, Preston.
 8th Dec., 1851. Perrin, Joseph, The Crescent, Levenshulme, Manchester.
 P. 6th Jan., 1849. *Picton, James Allanson, F.S.A., 19, Clayton square, and Sandy Knowe, Wavertree.
 3rd May, 1849. Pierpoint, Benjamin, Warrington.
 23rd Nov., 1848. Pilkington, James, M.P., Park place, Blackburn.
 10th Feb., 1853. *Platt, Robert*, Dean Water, Handforth, Manchester.
 23rd Nov., 1848. *Poggi, Rev. Dominica Joseph, D.D., New Brighton College, Cheshire.
 6th Dec., 1849. *Poole, John, 23, Oxford street.
 29th Dec., 1854. Porter, Rev. Jas., M.A., St. Peter's College, Cambridge.
 Mayor M., 1849-52. Potter, Sir John, Kt., M.P., Manchester.
 1st Sept., 1854. Preston, Rev. G., M.A., Grammar School, Whalley.
 12th Mar., 1857. *Preston, Geo. Theo. Robert, Rock House, West Derby road, and 13, Vernon street, Dale street.
 6th Dec., 1849. *Preston, William, 13, Vernon street, and Rock House, West Derby road.

Q

18th Dec., 1856. Quekett, Rev. W., M.A., Rectory, Warrington.

R

- 9th Mar., 1854. *Radcliffe, John, Eaton Cottage, Knotty Ash, and 4, Water street.
- 23rd Nov., 1848. Raines, Rev. Canon, M.A., F.S.A., Milnrow Parsonage, Rochdale.
- 15th April, 1858. Ralstone, J., Glasgow.
- p. 18th Sept., 1854. *Ramsay, Rev. Arthur, M.A., Highfields, Eaton road, West Derby.
- 15th April, 1858. *Rathbone, R., Aigburth road.
- 23rd Sept., 1854. *Rathbone, William, 24, Water street, and Greenbank, Wavertree.
- 21st Sept., 1854. *Rawlins, Charles Ed., jun., 23, Temple street, and 4, Windermere terrace, Prince's park.
- 15th Mar., 1849. Rawlinson, Robert, C.E., F.G.S., 34, Parliament street, Westminster.
- 13th Sept., 1854. *Raynes, James Trevelyan, 37, Old Hall street, and Rock park, Rock Ferry.
- 23rd Nov., 1848. *Reay, James, Guardian Office, Commerce Court, Lord street.
- 23rd Nov., 1848. *Reay, Thomas, 87, Church street.
- 29th Dec., 1854. *Rees, William, Oxford terrace, Vine street, Oxford street east.
- 7th Mar., 1850. *Richardson, Samuel, 102, Pembroke place.
- 15th Nov., 1855. Roberts, Thomas Kyffin, St. Asaph.
- p. 23rd Nov., 1848. Roberts, William John, Cross Mount, Aughton.
- 14th Dec., 1848. *Robin, John, Chapel Walks, South Castle street, and Grove hill, West Kirby, Cheshire.
- 20th Dec., 1855. Robin, Rev. P. R., M.A., Barnston, Birkenhead.
- 23rd Nov., 1848. *Robinson, Charles Backhouse, 12, Myrtle street, and Matilda grove, Aigburth.
- 8th Mar., 1853. Robinson, John, Westfield, Huddersfield.
- 11th Dec., 1856. *Robinson, Joseph, 1, Rose hill, and Tue Brook, West Derby.
- p. 3rd May, 1849. Robson, John, M.D., Warrington.
- 3rd Jan., 1850. *Ronald, Robert Wilson, Dale street.
- 15th April, 1858. Rooke, Rev. W. O., Bentham Rectory, near Lancaster.
- 15th April, 1858. Rowlandson, W., Kendal.
- 14th April, 1853. *Ryder, Thos. Bromfield, 2, Elliot street, Clayton square.
- 25th Sept., 1854. Rylands, Peter, Warrington.
- p. 13th Dec., 1854. Rylands, Thomas Glazebrook, Warrington.

S

- 15th April, 1858. *Sadler, J. M., Public Offices, Cornwallis street.
- 6th Dec., 1855. *Sandbach, W. R., Bank buildings, Cook street, and The Cottage, Aigburth.
- p. 19th Sept., 1854. Sansom, Rev. John, B.A., Buslingthorpe Rectory, Market Rasen, Lincolnshire.
- p. 7th Sept., 1851. *SANSOM, THOMAS, A.L.S., F.B.S.E., 33, Everton road.

- 23rd Nov., 1848. *Scholfield, Henry D., M.D., 14, Hamilton square, Birkenhead.
- 8th Jan., 1852. Sharp, John, The Hermitage, Lancaster.
- 2nd June, 1853. *Sharp, William*, 102, Piccadilly, London.
- 23rd Nov., 1848. Sharpe, Edmund, M.A., Coedfa, Llanwrst, N. Wales.
- 1st Dec., 1855. *Shawe, J. R., Arrowe hall, Cheshire.
- 7th Feb., 1850. *Sherlock, Cornelius, 22, King street.
- 3rd Dec., 1857. *Shimmin, Hugh, Melbourne buildings, 21, North John street.
- 11th Feb., 1858. *Shute, Arthur, 21, Water street.
- 3rd May, 1849. Shute, Robert, 2, Baring crescent, Exeter, Devon.
- 4th Dec., 1856. Shuttleworth, Sir, J. P. Kay, Bart., Gawthrop Hall, Burnley.
- 23rd Nov., 1848. *Simpson, Rev. Samuel*, M.A., St. Thomas' Parsonage, Douglas, Isle of Man.
- 23rd Nov., 1848. Skaife, Thos., Vanburgh house, Blackheath, London.
- 10th Dec., 1857. Slade, Rev. James, M.A., West Kirby, Cheshire.
- 2nd May, 1850. **Smith, James*, Brunswick dock, and Seaforth.
- 30th Dec., 1854. *Smith, John Peter George, Spring Bank, Breck road.
- 16th Sept., 1854. Smith, John, Langley, near Macclesfield.
- 6th Jan., 1853. *Smith, William Penn, 26, Hanover street.
- 23rd Nov., 1848. *Snowball, J. G., 10, Castle street, and 11, Upper Canning street.
- 6th Nov., 1856. Sodor and Man, the Lord Bishop of, Bishop's court, Isle of Man.
- 2nd Nov., 1854. Stainer, William, 35, Chorlton road, Hulme, Manchester.
- 3rd Jan., 1856. *Staniforth, Rev. Thomas*, Storrs, Windermere.
- 13th Dec., 1855. *Steiner, F.*, Hyndburn, Accrington.
- 1st Jan., 1856. *STEAINS, JAMES, 56, Upper Kensington, and 35, North John street.
- 15th April 1858. *Stevens, J., 166, Park road.
- 21st May., 1857. *Stewart, A. C., Union buildings, 16, North John street.
- 30th Dec., 1854. *Stewart, James Gordon, 3, West Derby street.
- 23rd Nov., 1848. *Stewart, Rev. John, M.A., Sandown Park, West Derby.
- 5th June, 1850. *Stock, John, 7, Exchange buildings, and Westdale, Wavertree.
- 20th Nov., 1856. *Stroud, William Lawrence, 1, Upper Woodlands, Clifton Park, Birkenhead.
- 8th Nov., 1849. *Stuart, William, 1, Rumford place, and Springfield House, Knotty Ash.
- 5th June, 1851. Stubs, Joseph, Park place, Frodsham.
- 25th Sept., 1854. *Sumners, Henry, Colquitt street.
- 21st Sppt., 1854. *Surr, John, Everton Valley.
- 23rd Nov., 1848. *Sutton, Hugh Gaskell, Exchange court, Exchange street, East, and Woodend, Aigburth.
- 4th Mar., 1852. *Sykes, James, Colonial buildings, 34, Dale street, and Breck house, Poulton-le-fylde.

T

- 15th April, 1858. Taylor, J. F., Cockermouth.
- P 23rd Nov., 1848. **Thom, Rev. David*, D.D., Ph.D., 28, Erskine street.
- 15th April, 1858. *Thomas, George, 31, Lord street.

- 18th Feb , 1858. *Thompson, Henry, 151, Upper Parliament street, and 11, North John street.
- P. 8th Dec., 1851. Thornber, Rev. William, B.A., Blackpool.
- 13th Sept., 1854. *Thornely, Samuel, 22, Clarence street.
- 8th Dec., 1851. *Tinne, John A., F.R.G.S., 13, Bank chambers, Cook street, and Briarley, Aigburth.
- 11th Dec., 1856. Threllfall, Richard, Avenham terrace, Preston.
- Mayor Li. 1854-55. *Tobin, James Aspinall, South John street.
- 14th Dec., 1848. Tobin, Sir Thomas, F.S.A., Ballincollig, Cork.
- 8th Jan., 1852. *Torr, John, 15, Exchange buildings, and Eastham.
- H.S. Lanc., 1857. Towneley, Charles, Towneley hall, Burnley.
- P. 2nd April, 1857. *TOWSON, JOHN THOMAS, F.R.G.S., 47, Upper Parliament street, and Sailors' Home.
- 5th Dec., 1850. *Tucker, Robert, 11, North view, Edge Hill.
- P. 23rd Nov., 1848. *Tudor, Richard A., M.R.C.S., Church view, Bootle.
- 14th April, 1853. *Turner, Charles, 4, Lancelot's hey, and Dingle Head.
- 27th Sept., 1854. *Turner, John Hayward, 52, Rodney street.
- 6th Dec., 1849. Turner, Edward, High street, Newcastle, Staffordshire.
- 20th Dec., 1855. *Turner, William, Junr., Stourton, Cheshire.

U

- 8th Mar., 1854. *Underwood, Rev. Charles W., M.A., Vice-Principal, Collegiate Institution.

V

- 23rd Nov., 1848. *Varty, Thomas, Walpole villa, Fairfield, and Lime street.
- 14th April, 1853. *Vose, James, M.D., 5, Gambier terrace, Hope street.

W

- Myr.C. 1838-39, 48-49. *Walker, Sir Edward Samuel*, Berry hill, Mansfield, Notts.
- 11th Dec , 1856. Walmsley, Thomas, Preston.
- 6th Mar., 1851. Warburton, Rowland Eyles Egerton, Aisley hall, Cheshire.
- 21st May, 1857. Ward, John Angus, Hooton lodge, Cheshire.
- 10th Dec., 1857. Wardell, William, Abbotsfield, Chester.
- 6th June, 1850. *Waterhouse, Sebastian, 13, Percy street.
- 26th Sept., 1854. *Watling, J. W. H., Wavertree.
- 5th Feb., 1857. *Watt, Richard*, Speke hall.
- 17th Dec., 1857. Watts, Sir James, Manchester.
- 2nd May, 1850. *Way, Albert*, M.A., F.S.A., Wonham manor, Reigate, Surrey.
- 1st Feb., 1849. *Webster, George, 6, York buildings, Dale street, and Mosley hill, Aigburth.
- P. 3rd Jan., 1856. Welton, Thos. A., F.S.S., 147, Fenchurch street, London.
- 1st Feb., 1849. *Whitehead, James Wright, Orange court, Castle street, and 15, Duke street, Edge Hill.
- 2nd June, 1853. *Whitley, George, 5, Clayton square, and Bromborough.
- 9th Oct., 1854. Whitley, Rev. John, M.A., Newton rectory, Warrington.
- 6th June, 1850. Whitley, Rev. William, B.A., Catsclough, Winsford, Cheshire.

- p. 30th Nov., 1854. Wilkinson, Thomas Turner, F.R.A.S., Corr. Mem. Lit. and Phil. Soc. Manch., Burnley.
- 8th Jan., 1852. *Willoughby, Edward G., Marine cottage, Tranmere.
- 6th Dec., 1855. Wilson, G. F., F.R.S., Belmont, Vauxhall, London.
- 23rd Nov., 1848. Wood, Venerable Isaac, M.A., Archdeacon of Chester, Newton, near Middlewich.
- 23rd Nov., 1848. Wood, Isaac Moreton, M.A., Newton, near Middlewich.
- 9th Feb., 1854. Wood, Samuel, F.S.A., The Abbey, Shrewsbury.
- 10th Feb., 1853. *Wood, Thomas, B.A., Blue Coat Hospital.
- 7th May, 1851. *Woodhouse, John George, 117, Henry street.
- 3rd Oct., 1854. Woolnough, Rev. Edward, Northenden Rectory, Stockport.
- 30th Dec., 1854. Worthy, George Smith, Bristol.
- 5th May, 1853. *Wylie, Alexander Henry, Union court, Castle street.

HONORARY MEMBERS.

- 6th Feb., 1851. Akerman, John Yonge, Sec. S.A.; Hon. M.R.S.L.; F.S.A. Newcastle; F.R.S. of Northern Antiquaries; Corr. Mem. S.S. Antiq. Scot. France, Russia, Switzerland, Rome; Hon. Mem. Roy. Acad., Stockholm; Somerset House, London.
- 27th Sept., 1854. Babington, Charles Cardale, M.A., F.R.S., F.L.S., Sec. C.P.S., St. John's College, Cambridge.
- p. 13th Nov., 1851. Bell, William, Ph.D., 31, Burton street, Burton crescent, London.
- 6th Feb., 1851. Blaauw, William Henry, M.A., F.S.A., Beechland, Uckfield, Sussex.
- 6th Feb., 1851. Boileau, Sir John P., Bart., F.R.S., F.S.A., Ketteringham hall, Wyndham, Norfolk, and 20, Upper Brook street, Grosvenor square, London.
- 27th Sept., 1854. Brewster, Sir David, K.H., D.C.L., LL.D., F.R.S.S.L. and E., Hon. M.R.I.A., St. Andrews, N.B., and Allerby, Roxburghshire.
- 6th Feb., 1851. Charlton, Edward, M.D., F.S.A. Newc., 7, Eldon square, Newcastle-on-Tyne.
- p. 1st Feb., 1855. Clarke, Joseph, F.S.A., Saffron Walden, Essex.
- 8th Jan., 1852. De Perthes, J. Boucher de Crevecoeur, Chevalier des ordres de Malte et de la Legion d'honneur, membre de diverses Sociétés Savantes, Abbeville.
- 6th Feb., 1851. Duncan, Philip B., D.C.L., Oxford.
- 27th Sept., 1854. Gray, John Edward, Ph.D., F.R.S., F.L.S., V.P.Z.S., Pres. Entom. Soc., &c., British Museum, London.
- p. 27th Sept., 1854. Latham, R. Gordon, M.D., F.R.S., Greenford, Middlesex.
- 6th Dec., 1849. Londesborough, The Lord, K.C.H., F.R.S., F.S.A., Grimston, Tadcaster, and 8, Carlton House terrace, London.
- 9th Dec., 1852. MacAdam, Robert, 18, College square, Belfast.
- 27th Sept., 1854. Murchison, Sir Roderick Impey, G.C.St.S., M.A., D.C.L., F.R.S., V.P.L.S., F.G.S., V.P.R. Geogr.S., Hon. M.R.I.A., Director-General of the Geological Survey of Great Britain and Ireland; Trust. Brit. Mus.; Hon. Mem. Acad. St. Petersburg, Berlin, Copenhagen; Corr. Mem. Inst. France, &c., 16, Belgrave square, London.

- 27th Sept., 1854. Owen, Richard, M.D., LL.D., F.R.S., F.L.S., F.G.S.,
British Museum, London.
- P. 7th May, 1851. Pidgeon, Henry Clarke, 3, Westbourne villas, Harrow
road, London.
- 27th Sept., 1854. Phillips, John, M.A., LL.D., F.R.S., Pres. Geol. Soc.,
Oxford.
- 27th Sept., 1854. Rosse, The Earl of, K.P., D.C.L., F.R.S., F.S.A.,
F.R.A.S., F.G.S., Birr castle, Parsonstown, Ireland.
- 27th Sept., 1854. Sabine, Major-General Edward, R.A., D.C.L. Treas.
and V.P.R.S., F.R.A.S., 13, Ashley place, Victoria
street, London, and Woolwich.
- 27th Sept., 1854. Sedgwick, Rev. Adam, M.A., F.R.S., F.G.S., F.R.A.S.,
Hon. M.R.I.A., Woodwardian Professor, Trinity
College, Cambridge.
- P. 6th Feb., 1851. Smith, Charles Roach, F.S.A., Member of the Roy.
Soc. North. Antiq. Copenhagen; Hon. Mem. SS.
Antiq. France, Normandy, Scotland, Spain, New-
castle, the Morini, Abbeville, Picardy, Wiesbaden,
Luxemburg, Treves, Touraine, &c, Temple place,
Strood, Kent.
- 6th Feb., 1851. Turnbull, William B., F.S.A. Scot., 3, Stone buildings,
Lincoln's Inn, London.
- 27th Sept., 1854. Whewell, Rev. William, D.D., F.R.S., F.G.S., F.R.A.S.,
Hon. M.R.I.A., Corr. Member of the Institute of
France, Master of Trinity College, Cambridge.
- 6th Feb., 1851. Williams, Rev. John, M.A., Llanymowddwy, Dinas
Mowddwy. Shrewsbury.
- 6th Feb., 1851. Willis, Rev. Robert, M.A., F.R.S., Jacksonian Pro-
fessor, Cambridge, and 23, York terrace, Regent's
park, London.
- P. 27th Sept., 1854. Wright, Thomas, M.A., F.S.A., Hon. M.R.S.L.,
Member of the Institute of France; of the Roy.
Soc. Northern Antiqs. Copenhagen; Hon. Mem. of
the Soc. of Antiquaries of France; Corresp. Mem.
Soc. Antiq. Normandy; of Soc. Antiqs. Scotland;
&c., 14, Sydney street, Brompton, London.
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Sketch of the North Western District
OF ENGLAND,
To illustrate Paper on the
POPULATION,
1801 - 51,
By J.T. Danson, V.P.
and T.A. Welton, Esq^s

Reference:
County Boundary Lines
District D^o D^o

TRANSACTIONS.

ON THE POPULATION OF LANCASHIRE AND CHESHIRE, AND ITS LOCAL DISTRIBUTION DURING THE FIFTY YEARS 1801-51.

By J. T. Danson, V.P., and T. A. Welton, Esqs.

(READ 10TH DECEMBER, 1857.)

PART SECOND.

IN the first part of this paper we observed that the two counties, as they are now combined by the Registrar General, to form what is termed the "North Western division" of England and Wales, have an area of 1,874,000 acres. This is about 2928 square miles. And as England and Wales contain about 57,800 square miles, our own district comprises about one-twentieth part of that area. The population of the N.W. division, we also observed, was in 1851 about two millions and a half; and that of England and Wales having been, at the same date, very nearly eighteen millions, it follows that upon one-twentieth of the area, we had then about one-seventh of the population of this, the most densely peopled part of the United Kingdom.

The proportion is probably now different. During the fifty years in view, our section of the population had increased by 185 per cent., while that of England and Wales, on the whole, had increased only by about 100 per cent. We have no reason to suppose that these rates have, during the last six years, been materially changed. In round numbers, then, the inhabitants of Lancashire and Cheshire are probably now increasing in number at an annual rate, exceeding that of the country, as a whole, in the proportion of three to two.*

Further, at the beginning of the century (1801,) the *Town* population of our district, treating as such that portion of it dwelling in towns of 2000

* 185 Per cent. in 50 years is two and one-tenth per cent. per annum.
101 Do. do. one and four-tenths do.

inhabitants and upwards, formed only about two parts in five of the whole. In 1851 such town population formed, in number, two parts in three of the whole. The average *annual* rate of increase during the half-century on town population was 3·2 per cent., and that on country population only 1·0 per cent.

In reference to the *town* population of England and Wales, as we have not made so careful an estimate, we cannot speak with so much accuracy; but we believe the statements we are about to make are near enough to the truth for any practical purpose.

There were in the whole country, in 1801, not more than three hundred towns such as are included in our definition, with an aggregate population of about three millions: being about one-third of the total number of inhabitants. In 1851, the number of such towns had risen to nearly five hundred, with nearly eight millions and three-quarters of inhabitants: being about half the entire population at that period.

This increased proportion of town population was not evenly distributed over the whole country. In the divisions numbered in the last census I. to V. (including the south and east of England and the metropolis), the proportion of town population was, in 1801, about seven parts in eighteen; and in 1851, about nine parts in eighteen, or one half; while in the remaining six divisions (including the northern and midland counties, and Wales), the proportion was, in 1801, about five parts in eighteen, and had risen in 1851 to above eight parts in eighteen. In other words, the average annual rate of increase, during the half-century, in the whole country, was 2·2 per cent. on town population, and 0·9 per cent on country population. In the southern and eastern counties, it was 1·9 per cent. on town population, and 0·8 per cent. on country population; and in the northern and midland counties, including Wales, it was 2·5 per cent. on town population, and 1·0 per cent. on country population.

The proportions, as usual, vary more in single counties than in larger divisions of the country. Take, for example, Sussex, where the average annual ratios of increase on town and country population were respectively 3·7 and 0·8 per cent.; and Norfolk, where the corresponding figures were 1·4 and 0·7 per cent., respectively.

It is proper to notice here, that, were the ratio of increase equal in all places, densely peopled country districts would still from time to time be brought under our definition of a "Town," by the mere effect of general

progress; and, consequently, there would always be a larger increase in the number of dwellers in towns, than in that of inhabitants of country districts. This circumstance, of course, accounts, in part, for the high rate at which the town population of this country is, in fact, increasing. But its share in the general effect is only moderate, and the greatest part of the difference between town and country rates is occasioned by the high degree of rapidity with which town populations generally increase. To prove that this is the case, a few figures will suffice.

The population of the *country districts*, in 1801, which have in the succeeding half-century been covered by new towns, or the extension of those already existing, can scarcely be estimated at more (in 1801) than four hundred thousand persons, and was probably considerably less. Adopting this number, however, we have a population of 3,400,000 then living on the area occupied in 1851 by about 8,750,000 persons. These figures give an average annual rate of increase of 1·9 per cent. on the inhabitants of those localities which were covered in 1851 with a town population, and of 1·0 per cent. on the population of the remainder of the country, showing that the rate of increase on the one has been nearly double that on the other. Treating the north-western division similarly, we find the corresponding figures are 2·9 and 1·2 per cent., respectively, exhibiting a still greater difference.

The causes which have produced this comparatively rapid increase of the population in our own district, and especially of that portion of it resident in towns, were briefly referred to in the first part of this paper. The necessity of confining what we have to say, in this second part, to such limits as may enable us to say it in a single evening, will prevent our entering upon any such examination of these causes as, for their importance, they deserve.

One or two preliminary conclusions concerning them may, however, be accepted without much risk of error: as that they have been generated by the action of laws as certain and uniform in their operation as those recognised in any of the known sciences; and therefore that the same laws, so far as circumstances have permitted their exhibition, have been in action from the first gathering of mankind into a village, down to the present day. And, duly regarding the magnitude of the interests affected, we may also safely infer, that such knowledge of these laws as may be readily attainable is, in the present age, necessary to a right performance of the social duties of man-

kind, and especially of those attaching to the governments of the most densely peopled and most civilized countries; and further, that the duty of recognising and acting under these laws, has become especially incumbent upon the people and government of England—there being now collected on the soil of England the largest and densest masses of population, and, in the aggregate, the largest proportion of what is termed town-population, ever yet brought together upon a similar area.

The mental experience of mankind has well proved that there is but one trustworthy method of acquiring such knowledge: that we cannot commence an enquiry into the nature of such laws as are here referred to, with any rational prospect of success, otherwise than by first ascertaining the facts indicating the course and character of their action. The present series of papers is, so far as we know, the first systematic effort in this direction; and it is obvious that the locality chosen is not only especially important, but is also especially favourable to such an enquiry.

Already we have seen reason to infer, that the causes acting directly on the distribution of the population, in our own district at least, are mainly, if not wholly, of an *industrial* character: in other words, that the increasing density of the population in this part of the island, as well as its local distribution over the surface, has reference to, and is governed by, the local facilities which have, so far, been made available, or apparent, for obtaining profit for capital, and wages for labour. Doubtless, there are other causes; but they would appear to be of a subordinate character, and to have a comparatively slight effect. And whatever the causes referred to—whatever their number, variety, or comparative force, or whatever their particular range or tendency, or their relations to each other—it is too strikingly apparent to admit of doubt, that they are, collectively, at, or very near, the root of the changes in this district during the last half-century, which have made it more justly remarkable, in a productive and mercantile point of view, than any similar district throughout the world.

But to the task before us. Whatever may be the duty, or the conduct, of the nation at large, or of the government, we cannot, as intelligent beings, and as members of this Society, witness these changes without desiring to know something more of them—of what they have been, and of what they are likely to be—than is apparent on the surface; and our first step towards gaining such knowledge, is a careful examination and comprehensive analysis of such records as we yet possess of the changes themselves.

This conducts us at once into the midst of a statistical enquiry. The figures already made public by the Government, touching the increased amount and varied distribution of the population, are so prominent and so valuable as to claim our first attention. Hence the amount of labor bestowed upon the somewhat dry materials brought before you in the present paper. Apart from a steady contemplation of its ultimate purpose such labor would be wearisome; allied with this, we have found it full of the highest interest. Though careful, for the sake of sound reasoning, not to anticipate the fruit of the enquiry ere its first stage be passed, we have had frequent occasion to observe its intimate connexion with social phenomena not only of the deepest popular interest, but also affecting intimately the future prospects of the entire district. It is now well understood that increased density of population is invariably followed by an increase in the value of land; not only in the same locality, but in all those with which it has easy means of communication; and that with this increase of value commonly comes variety of use. And as on the one hand the inhabitants of such localities desire to share, as far as possible, the advantages to be derived from easy communication with less densely peopled districts, and, on the other, the inhabitants of such districts desire to share, so far as they may, the local advantages which have led to the increased density of population elsewhere, means of facilitating communication—as good roads, canals, and railways—have been sought with an avidity closely corresponding to the extent and rapidity of the changes, the details of which we have been examining. Canals and railways, once in use, may be said to be cheap to the public, and profitable to their owners, in some proportion to their traffic per mile; and this clearly has a direct relation to the numbers, the wealth, and the industry of the population collected within the districts they serve. And the variety of forms in which the economy, not only of the production and distribution of wealth, but of every process subserving the advancement of civilization, is promoted by a well-distributed increase of the population of a given area of country, such as our own district, is such as we may well be excused from attempting to enumerate, much less to depict. Let us, however, trust that enquiries even more dry and discouraging at the outset than this, need no recommendation to the members of the Historic Society, beyond the certainty that they tend to effect the beneficial purposes for which the Society exists.

Before entering upon the figures to be dealt with in the present paper,

it may be as well to say a word or two as to the tables published with the preceding section. It should be observed that the tables framed for this paper were prepared without regard to its subsequent division into three parts; and that as each part of the paper may occasionally have reference to any of the tables, their publication in sections may sometimes involve a necessity for reference to figures not at the time before the reader.*

Table II. relating to towns was framed, as to the population in 1851, by taking the groups of parishes and townships including, or containing within themselves, the whole of the towns referred to, and then throwing off, or deducting by estimate, from each, so much of the included area and population, as from a careful consideration of all the available data, might fairly be deemed to belong rather to the surrounding *country* than to the town. In framing Table III. the same process was used for the towns of 1801 and 1851.

Table IV. was differently framed. It will be observed, in the first place, that it includes only what we have deemed *large* towns; and these are only twenty-one out of the fifty-two towns included in Tables II. and III. Here, therefore, the object being merely to exhibit, roughly, yet with approximate accuracy, the comparative increase of the masses of population congregated under the influences special to *large* towns, as distinguished from the smaller towns and the rest of the country, no attempt was made

* In Table II. a misprint occurs. In the fifth column of figures, and in the fifth line from the bottom, opposite "Crewe," 544 should be 5444. And in Table IV., in the sixth column of figures, opposite "Liverpool South," 42,639, should be 43,529. It may also be observed that there is a discrepancy between the statement of the total population of Lancashire and Cheshire, in 1851, made in Table I., and the corresponding statement in Table IV. The latter gives a number less than the former by 8970. The greater part of this difference arises from the population stated in Table I. including 3894 "Military and Marines in Barracks," and 4966 "Persons on board vessels," while these figures have been deducted in preparing Table IV., in order to make the comparisons between the several decennial rates of increase as accurate as possible, persons belonging to these classes not having been enumerated in the first four censuses. The difference yet remaining (110 persons) is the population of Tosside, in the Registration district of Settle, in Yorkshire, which was added to that of the Registration Division in 1851, in making Table I., because at all the censuses prior to 1841, it had been included with that of Sawley, in the district of Clitheroe, and was thus included in the aggregate population of the division in 1801. The same correction ought properly to have been made in Table IV., but its omission will not in the least affect the conclusions deduced; the amount of population being so small.

(as in the former instance, by estimating and deducting the proportion of "country" population, generally very small, included in the unbroken groups of townships and parishes), to exhibit so precise an account of the town population as in Tables II. and III. Hence the two accounts, if compared, will be found to differ. But the only instance of difference which seems to require particular notice is that detected on comparing Ashton-under-Lyne and Staleybridge, in Tables II. and III., with the same towns in Table IV. Here the adherence to *whole townships* (in Table IV.) has caused the township of Dukinfield (which, in fact, belongs about equally to both towns), to be thrown into Staleybridge. On the other hand, Ashton parish (which also belongs to both towns) is taken to represent Ashton town. The general result is that the population of both towns is overstated in Table IV. But this over-statement is comparatively unimportant in a Table only intended to shew the proportional increase; and the totals at the foot of Table IV. may be accepted as fair estimates. It will be seen, on examination, that they point to the conclusions indicated in the following figures:—

	Population.	Towns.		Population.	Rest of Lanc. & C'shire.	
		Increase.	Inc. %.		Increase.	Increase %.
1801	388,002			484,661		
	.....	98,121	25	.....	92,382	19
1811	486,123			577,043		
	.....	163,244	34	.....	104,357	18
1821	649,367			681,400		
	.....	273,278	42	.....	73,473	11
1831	922,645			754,873		
	.....	294,241	32	.....	93,122	12
1841	1,216,886			847,995		
	.....	337,250	28	.....	79,836	9
1851	1,554,136			927,831		
					
	Inc. 50 yrs.	1,166,134	301		443,170	91

It will be observed that neither the *rates of increase* nor the *periods of greatest increase* are the same, or nearly the same, for the large towns and for the rest of the country.

Table V., and also Table II., may be regarded as summaries of tables of a more detailed character, which are intended to be published with this or with the concluding section of the paper.

In order that what we are about now to say, as well as what we have said, of the growth of the population in different parts of the division, may be the more readily comprehended, we annex an outline map of the two counties. The unbroken lines show the outer boundaries of each county. The dotted lines show the sub-divisions made in preparing the present paper, in order to mark the areas within which particular changes are found to have taken place. Thus the first dotted line, running from the north bank of the Ribble, a mile or two below Preston, and through Salwick, Barton, Inglewhite, and Dilworth, to the river Calder, along that stream to Simonstone, and thence along the crest of the Pendle-hill, cuts off a large section of Northern Lancashire, and forms the southern limit of what we have termed the Northern region.* Another dotted line, leaving the last where it crosses the southern end of Longridge fell, and running through Elston and Pleasington to Rumbles moor, and thence by Holcombe moor and Brandwood moor to Todmorden, denotes one section of the great eastern region, which, for the sake of distinction, we may term the *Blackburn* district. A third dotted line, leaving the last at Rumbles moor, and running nearly due south, through Rivington, Lostock, West Houghton, and Hindley Green, and so through Golborne to the south side of Garswood park, and there turning north and running by a zigzagged line to Rufford, and so by the course of the Douglas back to the Ribble, marks out another

* The boundaries of the counties proper, and of the Registration counties of Lancashire and Cheshire, do not correspond precisely with each other. Thus, the northern region of the north-western division, as above described, takes in a portion of Yorkshire (included in the Registration district of Clitheroe), of large extent but thinly peopled. The eastern region, in a similar manner, is deprived of the township of Todmorden (which is included in the Registration district of the same name, placed by the Census arrangement in Yorkshire); and of the township of Disley-Stanley (which is included in the Registration county of Derby), the populations of which townships amounted in 1851 to 9924 persons. The southern region also includes the parish of Biddulph, in Staffordshire, and that of Hawarden, in Flintshire; but is reduced by the township of Malpas, and several others of less consequence, being included in the Registration county of Denbigh.

remarkable section of the eastern region, which we may term the *Wigan* district. The latter half of the same line, when continued from the Mersey to the Ribble, defines the western region within Lancashire. Another short line, leaving the last at Haydock park, and running, by Tait hall, to the Mersey at Glazebrook, completes the outline of the rest of the eastern region within Lancashire; and, so far, marks out its third and greatest, or *Manchester* district.*.

It will now be observed that a portion of Lancashire, including the towns of Warrington and Newton, and the outline of which is completed on the map by drawing a line from Garswood park, by Parr and Bold Hall to Runcorn Gap, is thrown into the southern region. It only remains to be observed that a similar but larger section is taken from Cheshire to complete the Manchester district of the eastern region; and that the peninsula of Wirrall, between the Dee and the Mersey, in the same manner completes the western region. The first of these sections is marked by a dotted line leaving the Mersey at Cheadle, and running through High Grove, Handforth, and Fulshaw, to Ollerton Common, thence to the river Dane at Eaton Hall, near Congleton, and along the course of that river to the borders of Staffordshire. The second is limited by a short line drawn from Farnton on the Mersey to Shotwick on the Dee. The grounds on which these divisions have been made will be made apparent in the third section of this paper.

It is to be regretted that the *township* boundaries are very seldom laid down upon our county maps. They will be found upon the six-inch ordnance map. This, though itself too large for reference, except where areas of very limited extent are in question, now affords the requisite data for those who may be disposed to improve the construction of our county maps; and these would be much increased in value, were the boundaries of the *Registration districts*, in all cases, carefully laid down upon them.

The arbitrary divisions on the annexed map have no further reference to existing local boundaries than is rendered inevitable by the necessity for including or excluding whole registration districts, when no more minute division could conveniently be made with the existing record.

* It will be observed that this is not coincident, in area, with what has been termed "the Manchester district," in a prior paper, by Mr. Danson, published in the Transactions of this Society.

The first table annexed to the present paper is numbered VI. It contains a list of fifty-three towns, or of fifty-two, if Liverpool north and south (Liverpool and Birkenhead, with a part of the neighbouring townships) be deemed, practically, one town.

The increase, per cent., on the population of each town in each of the five periods of ten years from 1801 to 1851 is stated in vertical columns; and the towns are arranged in the order suggested by the period of greatest increase. In other words, the five successive numbers found opposite the name of each town indicate the number of persons added, in each, during the corresponding ten years, to every hundred persons in the town at the beginning of the ten years; and those towns are placed together which showed their largest rate of increase in the same ten years.

In the first decade (1801-11) seven towns showed their largest decennial increase: Kirkham, in the northern region; and Colne, Leigh, Atherton, Horwich, Bolton, and Middleton, in the eastern region. But only one of these (Bolton) had, even in 1851, so many as ten thousand inhabitants.

In the second decade (1811-21) twelve towns reached their highest rate of increase: Burnley, Accrington, Haslingden, Over Darwen, Blackburn, and Tyldesley, in the eastern region; Ulverston and Clitheroe, in the northern; Prescott, in the western; and Chester, Knutsford, and Nantwich, in the southern regions. But only three of these (Burnley, Blackburn, and Chester) had, in 1851, so many as ten thousand inhabitants.

In the third decade, however, we have as many as eighteen towns culminating in their rate of increase; and these nearly all towns of a peculiar order. Lancaster is the only one in the northern region; but it is one of the most important there. In the eastern region there are Manchester, Staley-bridge, Hyde, Stockport, Macclesfield, Oldham, Bury, Rochdale, and Heywood. In the western, Liverpool north and south, and Southport. And in the southern, Warrington, Runcorn, Northwich, Congleton, and Sandbach. Of these eighteen towns, no less than fourteen had, in 1851, upwards of ten thousand inhabitants.

In the fourth decade, eight of the towns in our full list showed their highest rate of increase. Three of them had ten thousand inhabitants in 1851. One, however, (Fleetwood, at the mouth of the Wyre), was entirely new; and of Blackpool, a watering place, on the coast, a few miles further south, it is to be observed that its increase, in 1841-51, is not correctly

exhibited by the figures, owing to the census of 1851 having been taken comparatively early in the year. These are both in the northern region. In the eastern, we have Preston and Ashton-under-Lyne, and Chorley, Radcliffe, and Eccles. And in the western region, the single town of St. Helens.

In the fifth and last decade, the remaining eight towns culminated; but only one (Wigan) had ten thousand inhabitants at the end of the fifty years in view. There were three others in the eastern region: Bacup, Rawtenstall, and Hindley—three in the southern: Frodsham, Altrincham, and Crewe; and, in the western, one: Ormskirk. Crewe was a new creation, arising from the junction of the Manchester and Birmingham and the Chester and Crewe lines with the Grand Junction, at a point where no town existed, and railway convenience required one.*

These figures would alone go far to prove that some extraordinary development of the industrial energy of the district took place in the period 1821-51.

It would carry us too far to enter upon any collateral illustration of the movements here indicated. But, upon the single point touched in the last sentence, and which is certainly one of the most salient of those now presented to you, it may be stated, that the average amount of shipping paying tonnage duty in the port of Liverpool (the port of our district) in the three years closing each decade, was:

	Tons.
In 1809-11.....	646,000
„ 1819-21.....	837,000
„ 1829-31.....	1,464,000
„ 1839-41.....	2,343,000
„ 1849-51.....	3,637,000

Among the towns most remarkable for their rapid growth in the last decade (1841-51) we find Birkenhead (or South Liverpool) far before all the rest; and it is equally so in the two decades immediately preceding. But

* It may here be asked whether, in calculating the per centages for Table VI., we have made use of the town populations estimated for Table III., or those found in Table IV. The answer is *the latter*. Perhaps, nay probably, the former would have afforded the nearest approximation to the truth. But we have preferred taking numbers obtained from actual enumeration, to those arrived at by further estimates of our own, as affording a *safer* basis of calculation.

as has been shown in a previous paper, read before this society, the two towns on the opposite banks of the Mersey have become one in all that affects their growth; and cannot be correctly regarded apart.

The next town claiming notice on this ground is Burnley. This town displays throughout the fifty years the highest combination of steadiness with rapidity of growth. The towns next in order, selected for their display of the same characteristics, and arranged in the order in which they have excelled, are Runcorn, Preston, Rochdale, Oldham, and Liverpool. In all these places, the same or similar influences would appear to have been operating in the same direction, with considerable force, and with little variation of it, during the whole half-century. And, assuming that no reason to the contrary be apparent, it may be reasonably expected that the growth of population here marked will be continued. It can scarcely be otherwise than that land in or near these towns has been steadily rising in value, during the whole period, and is likely to continue to do so.

Bolton might have been placed in the same class, had not its *rate* of growth been falling slowly, but steadily, throughout nearly the whole fifty years, till it has apparently settled at about 20 per cent. in ten years.

Blackburn, also, has grown rapidly, though not steadily, having much abated this rapidity in 1821–31, and again in 1841–51. Bury shows a similar drawback in 1811–21, and in 1841–51. Ashton-under-Lyne also slackened its speed of growth in 1841–51.

Many towns, which exhibited a rapid growth in the first thirty, or even the first forty years of the half-century, have, in the last ten or twenty years, afforded indications of a decided check. The most important of these are Staley-bridge, Hyde, and Stockport, on the Tame; and Macclesfield and Congleton, which places (both being sustained by the silk trade), seem to wax and wane together. In the same list we may place Horwich, Clitheroe, Accrington, Heywood, and Chorley; the last showing an actual decrease of population in 1841–51. Southport, also, seems to be coming to a stand-still; but this may be only seeming. The census of 1851 was taken in March, that of 1841 in June; and the change must have seriously affected the watering-places in any comparison of the two enumerations. Blackpool is, of course, similarly affected.*

* The past rates of increase and probable future of watering-places may best be known by a reference to the number of houses erected, and in progress, at the period of

Some of the towns in this Table VI. may be termed “new,” in the sense of having, though in existence in 1801, advanced, since that date, to the point at which they became towns according to the definition of that term already stated. And some others are wholly new, as occupying sites on which, in 1801, there was no considerable aggregation of human habitations. Kirkham, near Preston, is an instance of the first description. It was not in 1801, very far short of the conditions required by our definition of a town. It has since complied with these conditions, but remains a small town, and seems likely to do so. Others, like Fleetwood and Crewe, are decidedly of the second description.

The greatest *relative* increase, in the fifty years, is seen at Staley-bridge and Hyde, Ashton-under-Lyne, Burnley, Clitheroe, Leigh, Rawtenstall, Over-Darwen—at Crewe, and at Fleetwood and Blackpool. In all these eleven towns (and they are nearly all *new* towns in the second sense of the term), the population of 1851 is more than seven-fold that found on the same area in 1801. The greatest *absolute* increase has, as might be expected, taken place around what were, in 1801, and still continue to be, the great towns—the principal and long-established centres of employment.

Of the eleven new towns last mentioned, three (Ashton, Staley-bridge, and Hyde), lie together in the Tame valley. The rates of increase of the two latter culminated in 1821–31; it is also to be observed that these two increased, in 1841–51, by less than 20 per cent. Ashton culminated in 1831–41; but in the last decade its rate was only 22 per cent.

Four more of the eleven (Burnley, Rawtenstall, Clitheroe, and Over-Darwen) lie in and north of Rossendale. All these, excepting Rawtenstall, culminated as early as 1811–21. The exception arises from what seems an extraordinary renewal of growth in Rawtenstall, in 1841–51.

Another, Leigh, is of little importance. Its greatest growth was in 1801–11. Crewe, Fleetwood and Blackpool need no further comment.

Among the *old* towns, the most prominent, in point of *relative* increase, are Oldham, Preston, and Liverpool.

The *lowest* rates of increase, during the fifty years, are in Kirkham,

each enumeration. The rate of increase thus obtained for Southport, in 1841–51, is 20 per cent., and that for Blackpool, 83 per cent.; while in the former place the number of houses, in course of erection, increased from 5 in 1841 to 19 in 1851; and in the latter, the corresponding advance was from 5 in 1841 to 21 in 1851.

Tyldesley, Knutsford, and Frodsham—all four termed “new,” because they passed the limit after 1801, and so entered the list as towns by definition. Also in Atherton, a place of little importance; but a town by definition in 1801. Also in Nantwich, the ancient seat of the salt manufacture of the Weaver Valley. And, lastly, in the ancient capitals of Chester and Lancaster, which are thus seen to be retreating further and further from their ancient eminence.

THE COUNTRY DISTRICTS.

These are so numerous, that any attempt to describe the progress of population in all of them would be certainly difficult and, in all probability, unintelligible. We have therefore selected * for treatment in detail, those most remarkable for density of population, or rapidity or slowness of increase. These number two hundred and four in all; and may be taken to represent the most remarkable features of the movement of the population of the country districts in each region.

Included in these two hundred and four selected districts, are all the townships skirting the Pendle hill. The peculiar inequality of progress in these townships, which will presently be adverted to, afforded the motive for thus including them all, and so presenting a complete view of the movement of population in that particular locality. It is also to be borne in mind that the general conclusions which were to be derived from a consideration of the rates of increase or of decrease of the populations of the selected localities could not be anticipated when the selection was made. This was made upon a general view of the whole number, as the ratios of decennial increase had not then been calculated.

These districts, as might be expected, vary greatly in size. And this, in some degree, obstructs the operations of the statist. Where the district is large, it is obvious that considerable, and even important, local variations of density, and also of increase or decrease of population, in any given period of time, may occur, wholly or partially within its limits, and may thus remain hidden, or be made apparent only so far as they affect the total for

* In making the selection, some regard has been had to magnitude and general importance; and no district has been taken, with a single exception, which is not altogether “out of town.” Thus the calculated ratios, which will be found in the tables annexed, are always based upon actual enumerations, and are not affected by any process of estimation. In the appendix will be found a memorandum of the Registration districts in which these two hundred and four selected country districts are situate.

the entire district. The farther we carry the subdivision of the localities submitted to the census, the more completely we develop these local changes. But there is a practical limit to such subdivision, in the labour involved, as well as in the necessity, imposed upon the officers charged with taking the census, to observe such boundaries as are well known and recognised, and thence easily referred to as of record. And even if these difficulties were not interposed, it would be inexpedient to carry the subdividing process beyond certain limits, which can only be determined from a careful consideration of the circumstances in each case. Country districts of such limited extent as to contain but a few hundreds of inhabitants are liable to apparent variations in population of a very striking character, in the utter absence of any noticeable change in their actual condition. The temporary absence of one of the principal families, the holding of a fair or village feast, the presence of a horde of gipsies, or some accident equally trivial, suffices relatively to raise or depress the population to an extent which in larger districts would have an important meaning.

Of the two hundred and four districts selected for investigation, one hundred and seven showed a continuous increase of their population at the end of each of the five periods of ten years now before us. The remainder (ninety-seven) showed in some of these decades, an increase, and in others a decrease.

But looking first at the whole number (two hundred and four) and marking, as to each district, the decade in which it showed the largest increase per cent, or *culminated in its rate of increase*, we find they divide themselves thus:—

In 1801–11.....	68
„ 1811–21.....	55
„ 1821–31.....	28
„ 1831–41.....	33
„ 1841–51.....	20
	<hr/>
	204
	<hr/>

We have already (ante p. 7) marked the per centage rate of increase for the whole population of these and the other country districts during the same period; and we have now to observe a remarkable coincidence between that and the result shown above. While the number of districts exhibiting

their highest rate of increase was gradually falling thus :—

68—55—28—33—20

the rate of increase of the entire country population was similarly falling thus :—

19—18—11—12—9

In Table VII. (annexed) will be found a list of the one hundred and seven districts of continuous increase, divided into five sections, corresponding with the five decades, each locality appearing under the date to which its highest rate of increase is to be referred, and the actual rate of increase for each district being shown for each period of ten years.

Table VIII. forms a similar list of the remaining ninety-seven townships, similarly arranged, with reference to their periods of greatest *increase*. And in Table IX. this list is repeated with a different arrangement, and so as to exhibit, as to each district, the period of greatest *decrease*.

Referring to Table IX. we find that the number of districts showing a decrease (or their greatest decrease) of population, increased, during the fifty years in view, in the following order :—

The ten years 1801—11	saw the greatest decrease in.....	9
1811—21	„ „	..... 4
1821—31	„ „	..... 15
1831—41	„ „	..... 24
1841—51	„ „	..... 45
		<hr/>
		97
		<hr/>

And a careful examination of these tables leads to the conclusion that the increase of the country population was decidedly more rapid and more general in the first twenty years than in the last thirty.

To treat so wide a subject much in detail would here be impossible. The tables are before you, and, in their printed form, will afford you, within a moderate compass, the means of ascertaining much that is interesting and important, but which we cannot here venture upon stating. A few remarks, however, may be offered upon each decennial period.

1801—11. This was undoubtedly the period of greatest increase in these country districts. The number of the selected two hundred and four in which the population increased more rapidly in this than in any other

decennial period was sixty-eight, or exactly one third of the whole. Of these no fewer than sixty were in the eastern and southern regions; and in the former were most numerous in the Wigan and Manchester districts.

During the same period fourteen districts decreased in population. Eight of these, also, were in the eastern and southern regions, and six in the western. But of these six nearly all were in the peninsula of Wirral, and accompanied, and probably promoted, a corresponding increase of population in districts then more conveniently subservient to the commerce of the Mersey. We shall presently see this movement entirely and strikingly reversed.

1811-21. This was also a period of wide and rapid increase. Fifty-five districts acquired their highest rate; and forty-seven of these were in the eastern and southern regions.

Six districts, at the same time, decreased more or less.

1821-31. Now we begin to detect the approach of a different state of things. Only twenty-eight country districts reached their highest rate of increase. But these were, some of them, significant. We find twelve in the eastern region: and of these no fewer than five (Denton, Haughton, Reddish, Newton, and Werneth), were in the Tame valley. Seven others (including Kearsley and Orrell) were in other parts of the eastern region. Eight were in the southern, seven in the western, and one only in the northern region.

At the same time twenty-nine districts showed a *decrease*. The most striking of these were—

	Decrease per cent.	
Longworth.....	25	Situate N. W. from Bolton.
Heyhouses.....	17	„ South side of Pendle Hill.
Flixton	13	„ Near mouth of river Irwell.
Dilworth	10	„ North of the Ribble
Downham	16	„ North side Pendle Hill.

1831-41. Here the change is more strongly manifest. The number of districts reaching their maximum rate was only thirty-three; and thirty-nine decreased.

Among the increasing districts were four north of Rossendale: Church-Coniston, Thurnham, Lytham, and Farington. Farnworth, and five other

districts, were near Bolton. Near the Tame were Droylsden, Godley, and Bredbury. In other parts of the eastern region five more. In the western and southern regions fifteen.

The thirty-nine diminishing populations were differently situated. Members of our society resident in or near, or otherwise acquainted with, these localities, or any of them, may perhaps be able to explain the causes of both movements. On the sides of the Pendle hill, and in the valley of the Henburn river, we find no less than eleven of these diminishing districts. And among the remaining twenty-eight, the most remarkable appear to be—

	Decrease per cent.	Situate.
Longworth.....	17.....	N. W. of Bolton.
Higher Booths	16.....	Near Rawtenstall.
Entwistle	21.....	N. of Bolton.
Butterworth	10.....	Near Rochdale.
Buglawton.....	11.....	Near Congleton.
Wheelton	12.....	Near Chorley.
Edgeworth	22.....	N. E. of Bolton.

Two of these (Higher Booths and Wheelton) had before been increasing rapidly.

Less remarkable in this decreasing list, but worthy of notice, were the districts of Chadderton, Crompton, Gorton, Ashton-in-Mackerfield, Orrell, Lowton near Leigh, Middlewich, and its suburb, Newton.

1841-51. Twenty country districts reached in this period their highest rate of increase. Of these the furthest north is Dalton-in-Furness. This may be traceable to the new pier at Piel and the connected works. The next is Fulwood near Preston. Then eight districts around Manchester: Little Lever, Worsley, Prestwich, Moston, Gorton, Levenshulme, Tintwistle, and Micklehurst: some of these would seem to have grown rather as suburbs of Manchester. Towards Macclesfield—Poynton and Chorley. In the southern region, six:—Haydock, Sale, Bowdon, Lymm, Barnton, near Northwich, and Odd Rode, near Congleton. And in the western region, Rainford, between St. Helens and Ormskirk, and Widnes, on the St. Helens and Runcorn Gap Railway.

But the number of districts in which the population was absolutely diminished in this period amounted to fifty-nine. More than one-fourth in number

(sixteen) of these districts lay again near the Pendle Hill, and in the Henburn valley ; and in both quarters we observe the same peculiarity, and one of which we have noticed previous instances : the groups of townships thus showing a diminution of their population in 1841-51, had previously shown a rapid increase.

Then, on the moorlands north of Bolton and Bury, we have seven more of these diminished townships :

	Loss. per cent.
Tottington, higher end.....	14
Musbury	11
Edgeworth.....	28
Entwistle	12
Quarltun	2
Walmersley	2
Ashworth	15

And near to these, on the south, were four more, which showed a rate of increase so slight as to indicate that the greater part of the natural increase of the population had there also been removed by migration. These were —

	Increase. per cent.
Longworth	2
Bradshaw	3
Tottington, Lower end	8
Birtle-cum-Bamford	6

So that much of the hilly country north of Bolton and Bury was, during this period, being slowly denuded of its population.

North of Wigan it was much the same ; the districts of Adlington and Blackrod, each showing a decrease of four per cent. ; and that of Haigh, a decrease of ten per cent.

And in other places a similar movement is plainly perceptible. Blatchinworth, (north of Rochdale), lost thirteen per cent. Crompton (near Oldham) lost five per cent. And Wheelton (N. E. of Chorley) lost twenty-two per cent., after having lost twelve per cent. in the ten years immediately preceding.

In the northern region, Garstang (on the Wyre) lost eight per cent.

Great Neston, in Wirral, lost ten per cent.

And Middlewich, and Newton in its neighbourhood, each lost one per cent.

The last mentioned loss may seem almost too small to be worthy of notice. In truth it is not so. And as the mode of regarding these figures which is apt to suggest that it is, is not only erroneous, but so far erroneous as to render those who may adopt it practically blind to some of the most remarkable of the changes here pointed out, we may as well explain why. It will be remembered, that during each of the five periods (of ten years each) composing the half-century in view, there was a considerable increase of the population of the whole kingdom. Had this increase been equally divided over its entire area, each locality would, at the end of the fifty years, have found itself covered with a population about twice as large as it had at the beginning. The general increase of 1841-51 would, so divided, have given to each locality an increase of more than twelve per cent. It is certain that the natural increase (or the excess of births over deaths) was considerably greater in the country districts than in the towns. Hence, local circumstances apart, we might reasonably expect to find considerably more than twelve per cent. added to the population of each such district, between 1841 and 1851, had there been no loss by migration. And hence, further, where we find an absolute diminution of the population of a country district, we must, in order to arrive at the probable actual effect of migration, add to such loss more than twelve per cent. for the natural increase of the same interval. The total thus obtained it is that represents the real disturbance, and measures the force of the circumstances, to bring about a better knowledge of which, as they operate upon a large scale, is the primary purpose of these papers.

The principal facts thus elicited from a very cursory consideration of the Tables VII., VIII., and IX. may be summarily repeated in the form of a Table, thus:—

Decennial periods.	Localities in which, and periods at which, Country Districts reached their highest rate of increase.						Localities in which, and periods at which, a decrease of population took place in Country districts.					
	Northern Region.	Eastern Region.			Southern Region.	Western Region.	Northern Region.	Eastern Region.			Southern Region.	Western Region.
		Blackburn* Section.	Wigan Section.	Manchester Section.				Blackburn Section.	Wigan Section.	Manchester Section.		
1801-11	5	8	15	23	14	3	..	3	..	3	2	6
1811-21	4	17	6	17	7	4	..	..	..	2	3	1
1821-31	1	3	1	8	8	7	4	6	5	7	5	2
1831-41	3	..	3	12	6	9	5	11	6	11	5	1
1841-51	1	..	1	10	6	2	9	14	6	19	9	2

Increase of population in the country districts was the rule, almost invariably, in 1801-11—only fourteen out of the two hundred and four showing a decrease. Decrease, in its most absolute sense, was not the rule, but was so general as to include nearly one-third (in number) of these districts in 1841-51. And were we to adopt the truer definition of decrease which regards as such all shortening of the average increase traceable to migration, the rule prevalent at the end of the half-century would probably be found to be precisely the reverse of that prevalent at the beginning.†

Turning, with a like view, to the country districts of greatest *increase*, we find that a large number of them have, in some decennial period of the fifty years (and a few even in several such periods of that term) increased their population by upwards of forty per cent., or at a rate fully three-fold that attributable to the average excess of births over deaths.

* The Registration districts which are comprised in each of the four regions are stated in Table I. It remains to be explained that the *Blackburn* section of the eastern region is nearly equivalent to the Registration districts of Burnley, Haslingden, and Blackburn. It includes, however, a part of the Registration district of Preston, in which the townships of Dilworth and Ribchester are situate. The *Wigan* section includes the remainder of the registration district of Preston, and those of Chorley and Wigan: also a portion of the registration district of Bolton in which the township of Sharples is situate. The remainder of the registration district of Bolton, with those of Bury, Leigh, Rochdale, Oldham, Manchester, Salford, Barton-on-Irwell, Chorlton, Ashton-under-Lyne, Stockport and Macclesfield, constitute the *Manchester* section.

† It may be noticed, that in eight out of the two hundred and four districts, there was a decrease in population in each of the last *three* intervals. These were Garstang, Twiston, Downham, Roughlee Booth, Goldshaw Booth, Barley-with-Whitley Booth, Dilworth, and Longton, all situate in the Blackburn section and the northern region except the last; and nearly all adjacent to the Pendle Hill. In thirteen more there was a decrease in the last *two* intervals.

In 1801-11 there were thirty-five such districts;—in 1811-21 there were twenty;—in 1821-31 there were twenty-three;—in 1831-41 there were twenty-six; and in 1841-51 there were sixteen.

Some of these districts are worthy of especial notice.

Pendlebury, a district west of the river Irwell, and three or four miles W. N. W. of Manchester, increased by more than forty per cent. in four successive decennial periods—in short, in all except the last.

Others increased thus rapidly during three out of the five decennial periods before us:—

Church-Kirk in the first, second, and fourth.

Weston, in the second, third, and fifth.

Much Woolton, in the second, fourth and fifth.

Newton, near Hyde, in the first, second, and third.

Litherland, in the third, fourth, and fifth.

Hoose, in the first, third, and fourth.

And nineteen other districts will be found (see tables annexed) to have increased at this high rate in more than one of the five decennial periods before us.

COUNTRY DISTRICTS GENERALLY*—INCREASE IN THE FIFTY YEARS, 1801-51.

Table X (annexed) contains a list of the sixty-two country districts which showed the highest rate of increase per cent., taken on the previous population, in the entire fifty years. They are arranged in the order of this increase. And, in other columns, are shewn the additional number of persons, *per square mile*, thus brought within each district; and also the successive decennial steps by which the ultimate increase was attained. The highest addition made was in Hoose (882 per cent.), and the lowest in Marsden (161 per cent.) Both these, however, were places of little importance—Hoose lying at the western extremity of the Wirral peninsula, and Marsden (Great and Little) some three or four miles south-west of Colne, on the Leeds and Liverpool Canal, and also at one of the extremities of the great District before us. Among these sixty-two districts, however, though not at either extremity of the list, will be found most of

* We here leave the 204 selected districts, of which we have just treated, and return to a consideration of the entire mass of country districts referred to in Table V.

those which, while retaining, by the scattered form of their population, the character of country districts, have been most affected by the changes we are now contemplating. We desire therefore to recommend to the especial attention of those whose local knowledge may enable them to throw light on the local changes here marked, and to point to their causes, this Table (X) as well as (for reasons to be presently stated) the three immediately following.

It will be observed that of the sixty-two districts as many as thirty-six ended with rates of increase less rapid than those with which they began ; and twenty-six with equal or higher rates. The periods of culmination of rate of increase were —

As to 15 districts, in 1801-11.

8	„	1811-21.
12	„	1821-31.
19	„	1831-41.
8	„	1841-51

Table XI contains a list of thirty country townships, parishes, &c., *which started, in 1801, with populations peculiarly dense*. They ranged from 1,577, down to 608 per square mile, at that date. It will be seen that in only eighteen of these was the increase of population, in the following fifty years, more than 100 per cent. In eighteen out of the thirty the rate of increase in the last decade (1841-51) was less than in the first (1801-11); and in the other twelve it was equal or higher.

In Table XII will be found a list of the thirty country townships, &c., *in which the highest density of population had been reached in 1851*. They range from 6681 down to 1346 per square mile. The highest rate here shown closely approximates the minimum fixed upon for defining a Town population (see Part I of the present paper, Trans. vol. ix. p. 199.) Two thousand persons on an area of 180 acres afford 11.1 persons per acre ; and 6681 per square mile give 10.4 persons per acre. It is obvious that the degree of density attained by several of the townships in this Table (XII) is inconsistent with the preservation of the ordinary characteristics of a country population. And it here may be worthy of attention that the reduced effect of space in diminishing human intercourse, under the action of modern facilities for rapid travelling and the conveyance of goods, newspapers, letters, and telegrams, tends strongly to promote the spreading of

a portion of the population who crowd the streets, offices and factories of our towns by day, over wide areas of country during the evening and night. And the definition of local habitation, for the purpose of the census, by the place of sleeping on the night preceding the day of enumeration, gives full effect (in the decennial record) to this growing change in the habits of a considerable section of our town population.

In Table XIII is a list of the thirty country townships, &c., *which most increased the density* of their population in the half-century. The highest clear addition was made at Tonge (near Middleton), 5441 per square mile being added, by an increase, per cent., of 439.*

We have now laid before you, in a very summary manner, but at as great length as the compass of an evening meeting will permit, a sketch of the most remarkable of the local variations of the very general and rapid increase of population in this our district of Lancashire and Cheshire during the only period (of fifty years) for which materials applicable to the formation of such a sketch yet exist. And in the Tables of figures we have appended to this and the preceding paper, will be found the means of extending, with labor comparatively small, the researches we have made, and of giving to our sketch, so far left vague for lack of space, such additional detail as may satisfy the wishes of those who are interested in the progress of particular localities.

The subject is, we know, not an inviting one to most minds. And the limits within which we have been compelled to deal with it, have not permitted us to exhibit more than its hardest and driest features. It were idle to regret this. It could not be otherwise. Yet we may be permitted now to add a word or two in a wider and more general sense.

Had the subject not possessed for us an interest far other than merely statistical, we should not have taken it up, still less have bestowed upon it the labour of which you have, in these papers, but faint and imperfect evidence.

* In our first instalment of this paper, p. 200, vol. IX, we state the *towns by definition* in 1801 to be *twenty-nine* in number, and to contain a population of 364,000. These figures (as appears by Table III. at the end of that part), should have been *twenty-six* and 337,000. The error arose from an accidental reference to Table II. in lieu of the right one. It will also be noticed that the definition previously given of "a town" has not been made use of in the comparisons on pp. 205-7. This latter circumstance, however, though it deserves to be mentioned, is of small importance.

To us it seems, and doubtless, too, to you, that the mere manner of living of our race, when placed under new conditions of existence, should excite something more than curiosity. Fitly contemplated, it affords exercise for the loftiest of our intellectual faculties, and calls into play feelings of all others the most strongly conducive to the elevation and refinement of our nature. Here, however, we have more than a mere change. The movement of the population of this part of the British islands has assumed, and for a long period has maintained, a continuous and definite direction, bringing together a very large number of persons under circumstances of which the history of the world affords no previous example. It now presents to us a portion of the great drama of human existence on earth, itself, indeed, of no great magnitude, in either time or space, but obviously of momentous consequence to the immediate future of our country, and to the nations who are ruled by our countrymen; and thence, and otherwise, having a most important bearing on the affairs of the world at large.

We need not descend into detail. Put aside the individual motives which, for the last fifty or sixty years, have been bringing down from the breezy uplands and the bleak hills of our northern counties, from out the narrow valleys of North Wales, and from Ireland, and training to the life and toil of towns, the many hundreds of thousands of men and women who now, with their progeny, fill, or cluster around, the busy, noisy, smoky factories covering so great a part of our district—put aside the desire for wealth which prompts the few, and the mere desire to live which prompts the many—we have here, by whatever means produced, a spectacle such as no part of the earth has ever before presented. We know it. Yet—and even therefore—we know it not. We know it too well with our eyes to know it well with our brains. And, in plain words, what is it? A mass of population probably not less than that of all Scotland as it is at this hour—probably not less than was ruled by Solomon in all his glory—is living, and by occupation and by habit fixed, upon an area which, were it all as fertile as its richest tracts, would not, were they confined to it, afford sustenance for one-third of their number. In other words, some two and a half millions of human beings are, now and here, directly dependent upon commerce with all the world for their very existence. Their customers are many and various. All counted, they may be six hundred millions in number; and they are of every nation on earth. And the human body is not more dependent upon the commerce of its lungs with the atmosphere, than are these

the people of our great manufacturing district upon a like free communication with their customers abroad.

As read by some, this indicates a great and perilous necessity. Great it is; but not perilous. It also indicates a great mutual dependence. And, further, a great security for the future enlightenment and freedom of the race. The means whereby we spin and weave cotton, obtaining first the raw material, and then exchange the manufactured product for the means of living, and of enjoying (and abusing) life, are also means to ends greater far than these. We export more than our manufactures. We give, perhaps, more than we sell. For at this great centre of so much human intercourse, some good and great influences are paramount; and must needs be kept so, or it would speedily cease to be such a centre. Here thought and speech are free; and are communicated by methods we handle boldly, and are daily improving; but do not yet know all the powers of. Here industry, well directed, is permanently and perpetually exhibited as the source of great physical blessings and great pecuniary power. Here, too, the best known modes by which men may govern themselves, and each other, so as to knit together into national power the will and the intelligence of individuals, are displayed in free action; and all their results, good and evil, are daily presented to view. And surely no man fitted to observe and to reflect on the ways of his fellowmen can come hither from abroad, as so many must, on mercantile errands, come, and not carry away truer and stronger impressions, not only of the real sources of human power, as they are yet known to us, but something also, of the most profitable methods of employing, and the most apt means of abusing, these powers.

Granted that the end aimed at by the many builders of the edifice is commonly but low. Here a fortune, and admission to another rank of society, with other ways of wasting time. There, good wages, and enjoyments of a coarser kind. "Heaven shapes our ends, rough-hew them how we may." The end attained, which no man aims at, or could attain by any aiming, is a vast increase of the means of augmenting human civilization—an increase, which must go on, of means, which we may rest assured are not accumulated to be wasted—though the ultimate extent and efficiency of these means we of this generation are perhaps no more fitted to estimate than we are as yet capable of wisely wielding them. For our task is of the time; and our wisdom in the doing of it, and no other. Its forms are as various

as our individual powers ; and some of these offer themselves to every man's hand. For instance, and only for instance, we may all find out for ourselves, and may try to show to our neighbours, the folly of breathing foul air because it is convenient to congregate in towns, and so of embittering and shortening, by a barbarous blunder, the very lives we go to and fro to make pleasant, and labour so hard to sustain. We may safely and with great confidence in this and some other notable, and now rather notorious, ways take much better care of that wondrous mechanism of life we all possess and have the duty of tending, beside which the mechanism of our best fitted mills is coarse and clumsy, and except to sustain which, in healthy and pleasurable action, our mills and their belongings have literally no use. And to go further afield, we may still go on, as these pages, however dimly, show we have hitherto, more or less discreetly, gone on, each in his place, though, for the most part on but petty ends intent, yet slowly and surely, helping to build up a new and mighty power upon the earth ; and from year to year, and from father to son, may learn better how to do our work—and may do this in the assurance, growing ever firmer and better founded as we look more widely and more considerately around us, that we are designedly honoured by our Great Master with shares in a right noble achievement.

But, as yet, it is to be apprehended that the time is not come for our doing more. Our task is of the day. Nor shall we do even that well—as we, who now address you, are very firmly persuaded—if those among us to whom has been given the intellectual guidance of the multitude shall not give due and diligent heed to such lessons, dry and tedious though they be, as abound in the numerical records we now venture again to urge on the attention of the Historic Society of Lancashire and Cheshire.

MEMORANDUM SHOWING IN WHICH REGISTRATION DISTRICTS THE TWO
HUNDRED AND FOUR SELECTED COUNTRY DISTRICTS ARE SITUATE.

<i>Ulverston.</i> Church-Coniston Dalton-in Furness	<i>Bolton.</i> Kersley Farnworth Little Hulton West Houghton Halliwell Brightmet Harwood Bradshaw Turton Longworth Entwistle Edgeworth Little Lever Darcy Lever Quarleton Sharples Rumworth	<i>Ormskirk.</i> Burscough Bickerstaffe Maghull
<i>Lancaster.</i> Poulton-le-Sands Thurnham		<i>Prescot.</i> Little Woolton Much Woolton Roby Hayton Widnes Rainhill Rainford Knowsley Sutton
<i>Garstang.</i> Garstang		<i>West Derby</i> Great Crosby Litherland Allerton
<i>Fylde.</i> Lytham Poulton-le-Fylde		<i>Warrall.</i> Hoose Wallasey West Kirby Poulton-cum-Spittle Childer-Thornton Whitby Little Sutton Heswall-with-Oldfield Great Neston Little Neston
<i>Clitheroe.</i> Twiston Downham Chatburn Pendleton Wiswell Whalley Rimington	<i>Bury.</i> Walmersley Tottington Lower End Birtle-cum-Banford Ashworth Pilkington Ainsworth Hopwood	<i>Warrington.</i> Haydock Newton-in-Mackerfield Grappenhall
<i>Burnley.</i> Pavilham Higham Booth Heyhouses Great Marsden Little Marsden Trawden Foulridge Barrowford Old Laund Booth Roughlee Booth Goldshaw Booth Barley with Whitley-Booth Worsthorne Simonstone New Laund Booth, &c.	<i>Rochdale.</i> Butterworth Blatchinworth Wuerdale-with-Wardle	<i>Runcorn.</i> Moore Halton Weston Frodsham Lordship Helsby
<i>Haslingden.</i> Higher Booths Tottington Higher End Mushbury Old Accrington	<i>Oldham.</i> Chadderton Tonge Royton Crompton Thornham	<i>Altrincham</i> Sale Bowden Lymm
<i>Blackburn.</i> Clayton-le-Moors Church-Kirk Oswaldwistle Lower Darwen Livesey Great Harwood Witton	<i>Manchester.</i> Failsworth Moston Blackley Prestwich Little Heaton	<i>Congleton.</i> Buglawton Biddulph Odd Rode Wheelock
<i>Preston.</i> Fulwood Dilworth Ribchester Walton-le-Dale Much-Hoole Farington Penwortham Longton	<i>Salford.</i> Pendlebury	<i>Northwich.</i> Barnton Over Wharton Moulton Newton Middlewich Davenham Marston Wincham Hartford
<i>Chorley.</i> Withnell Whitt'e-le-Woods Leyland Adlington Croston Wheulton Euxton	<i>Barton-on-Irwell.</i> Clifton Worsley Flixton Urmstone	<i>Nantwich</i> Church-Coppenhall Barthomley Shavington-cum-Gresty Burwardsley Tarporeley Tiverton Bunbury Audlem Wybunbury Stapeley
<i>Wigan.</i> Blackrod Haigh Aspull Pemberton Orrell Billinge Higher End Billinge Chapel End Shevington Abram Standish Ashton-in-Mackerfield Upholland	<i>Ashton-under-Lyne.</i> Droylsden Denton Haughton Godley Newton Mottram Tintwistle Micklehurst Hollingworth	<i>Great Boughton</i> Upton Great Saughall Higher Kinnerton Hawarden Farndon Tilston
<i>Leigh.</i> Golborne Lowton Astley	<i>Stockport</i> Marple Bredbury Werneth Reddish Handforth-cum-Bosden Romiley	
	<i>Maclesfield.</i> Bollington Whaley-cum-Yeardsley Chorley Worth Eaton Poynton	

TABLE VI.

TOWNS. RATES OF INCREASE. ORDER OF PERIOD OF GREATEST INCREASE

		INCREASE PER CENT.							INCREASE PER CENT.				
		1801	1811	1821	1831	1841			1801	1811	1821	1831	1841
		to	to	to	to	to			to	to	to	to	to
		1811	1821	1831	1841	1851			1811	1821	1831	1841	1851
Kirkham	N	42	24	*10	18	*4	Stockport	E	28	26	32	20	6
Colne	E	47	36	11	6	5	Macclesfield	E	37	44	47	8	19
Leigh	E	25	24	13	22	24	Liverpool (North) ..	W	27	34	52	37	31
Atherton	E	20	6	1	7	4	Liverpool (South)...	W	21	45	176	167	130
Horwich	E	52	21	24	6	5	Southport	W	19	11	86	51	12
Bolton	E	38	29	32	20	21	Warrington	S	12	17	23	17	9
Middleton	E	35	31	19	12	13	Runcorn	S	49	51	62	38	25
Ulverston	N	15	28	13	10	25	Northwich	S	14	19	21	9	15
Clitheroe	N	29	82	62	30	7	Congleton	S	20	39	46	*1	14
Burnley	E	38	52	22	42	43	Sandbach	S	25	26	28	24	2
Accrington	E	6	73	21	39	17	Fleetwood	N	—	—	—	New.	7
Haslingden	E	27	29	18	4	12	Blackpool	N	23	29	26	109	30
Over Darwen	E	23	52	4	34	25	Preston	E	43	43	36	50	37
Blackburn	E	26	45	23	35	27	Chorley	E	15	41	27	42	*3
Tyldesley	E	16	24	16	*6	14	Radcliffe	E	12	11	26	31	23
Prescot	W	4	23	13	8	17	Eccles	E	12	15	13	21	17
Knutsford	S	3	30	3	13	11	Ashton-under Lyne..	E	22	36	29	38	22
Nantwich	S	15	17	5	12	2	St. Helens	W	26	14	33	49	38
Chester	S	7	24	7	7	16	Bacup	E	37	23	7	27	45
Lancaster	N	2	9	22	13	3	Rawtenstall	E	22	39	35	13	42
Bury	E	23	19	42	35	23	Wigan	E	27	26	19	23	27
Heywood	E	20	27	59	42	8	Hindley	E	27	27	22	19	29
Rochdale	E	24	26	29	23	25	Ormskirk	W	20	25	11	15	26
Oldham	E	39	30	49	32	24	Frodsham	S	8	15	12	3	21
Staleybridge	E	49	61	155	54	18	Altrincham	S	20	13	18	26	32
Hyde	E	70	86	113	42	14	Crewe	S	*6	28	1	37	2152
Manchester	E	22	39	47	31	30							

* Decrease per cent

TABLE VII.

COUNTRY DISTRICTS EXHIBITING CONTINUOUS INCREASE.

	INCREASE PER CENT.						INCREASE PER CENT.				
	1801 to 1811	1811 to 1821	1821 to 1831	1831 to 1841	1841 to 1851		1801 to 1811	1811 to 1821	1821 to 1831	1831 to 1841	1841 to 1851
<i>Greatest Increase 1801 to 1811.</i>						<i>Greatest Increase, 1821 to 1831.</i>					
Padiham	21	20	15	7	19	Poulton-le-Sands	?	31	49	30	42
Walton-le-Dale	25	20	—	15	3	Sutton	19	10	36	29	29
Croston	32	13	2	4	3	Roby }	11	23	29	11	10
Leyland	27	20	7	5	1	Huyton }			27	15	3
Withnell	37	9	9	36	16	Great Crosby	17	35	78	62	23
Pemberton	27	25	16	3	20	Maghull	12	20	33	8	2
Aspull	32	15	30	13	18	Kersley	28	32	48	27	23
West Houghton	25	11	7	1	—	Rumworth	10	10	37	12	7
Allerton	45	27	14	18	9	Reddish	17	8	50	38	3
Pilkington	27	22	23	2	15	Eaton	24	43	61	2	9
Birtle cum Bamford ..	40	14	37	6	6	Weston	17	56	81	18	49
Halliwell	32	25	30	9	22	Helsby	11	27	41	7	5
Sharples	57	50	25	11	36	Wincham	14	17	20	10	5
Bradshaw	53	23	8	7	3	Burwardsley	23	9	45	16	5
Tottington Lower End	37	24	27	7	8	Bunbury	11	16	25	11	1
Royton	44	26	15	1	22	Tarporley	4	14	24	12	5
Thornham	63	25	6	—	4						
Tonge	58	23	29	35	58	<i>Greatest Increase, 1831 to 1841.</i>					
Pendlebury	58	51	49	41	25	Church Coniston....	36	23	4	96	12
Biddulph	24	14	19	16	16	Lytham	25	12	18	37	30
Halton	42	19	24	6	12	Farington	30	3	31	156	12
Over	104	20	21	8	12	Shevington	12	15	8	25	2
Moulton	82	5	24	31	3	Abram	6	—	1	76	7
Marston	23	16	15	3	17	Newton-in-Mackerfield	9	3	30	46	19
Tiverton	31	20	5	11	9	Rainhill	36	17	6	71	31
Wybunbury	26	22	4	19	—	Much Wootton	37	61	39	69	62
						Little "	6	27	9	52	5
<i>Greatest Increase, 1811 to 1821.</i>						Litherland	?	38	57	101	42
Great Marsden }	24	37	4	1	4	Farnworth ..	25	14	43	65	32
Little Marsden }			3	16	26	Darcy Lever	34	21	17	52	23
Clayton-le-Moors	26	38	11	20	27	Brightmet	16	13	7	28	18
Old Accrington	6	42	5	37	25	Turton	30	17	23	40	16
Church Kirk	47	59	30	58	32	Droylsden ..	42	30	5	65	27
Oswaldwistle	30	41	19	13	15	Marple	11	17	1	29	3
Lower Darwen	10	24	19	15	14	Bollington	23	14	56	62	7
Standish-with-Langtree	15	17	17	7	4	Grappenhall	7	11	10	33	21
Golborne	15	18	17	8	15	Shavington-cum-Gresty	5	38	17	38	3
Billinge Higher End }	16	21	1	5	26	Upton	5	13	40	51	27
" Chapel End }		31	28	21	15	Hoose	67	14	72	127	33
Bickerstaffe	12	33	8	21	6	Wallasey	61	1	26	69	27
Little Hulton	26	31	21	2	4						
Hopwood	14	28	2	9	2	<i>Greatest Increase, 1841 to 1851.</i>					
Wuerdale-with-Wardle	30	34	20	2	14	Dalton-in-Furness	6	18	10	20	42
Blackley	1	22	4	6	9	Fulwood (excl. Mily.) ..	1	7	16	26	52
Failsworth	10	17	9	6	14	Haydock	10	14	2	39	54
Hollingworth	20	28	26	14	17	Rainford	11	5	19	13	26
Clifton	11	29	9	7	21	Widnes	13	20	38	11	46
Didsbury	19	26	14	17	16	Little Lever	24	17	20	16	36
Handforth-cum-Bosden	27	33	13	21	12	Prestwich	20	25	8	8	29
Worth	35	60	21	34	35	Tintwistle	32	17	15	26	74
Moore	19	31	23	6	6	Micklehurst					13
Stapeley	5	26	8	26	3	Worsley	22	17	9	6	22
Hawarden	9	14	7	12	1	Levenshulme	7	14	41	13	55
Little Sutton	32	50	18	10	1	Poynton	15	9	38	14	46
						Odd Rode	9	14	14	17	22
						Sale	10	16	5	19	31
						Bowden	19	7	6	20	112
						Lymm	18	10	10	15	19
						Barnton	19	27	19	18	30

TABLE VIII.

COUNTRY DISTRICTS EXHIBITING INCREASE NOT CONTINUOUS.

	INCREASE PER CENT.						INCREASE PER CENT.				
	1801 to 1811	1811 to 1821	1821 to 1831	1831 to 1841	1841 to 1851		1801 to 1811	1811 to 1821	1821 to 1831	1831 to 1841	1841 to 1851
<i>Greatest Increase, 1801 to 1811.</i>						<i>Greatest Increase, 1811 to 1821.</i>					
Withington	23	*2	17	22	17	Downham	14	15	*16	*30	*2
Heswall-cum-Oldfield..	92	*28	27	34	29	Roughlee Booth	16	21	*1	*18	*8
Witton	78	30	*2	2	27	Great Harwood	1	26	16	*7	12
Dilworth	64	13	*10	*3	*1	Lowton	17	21	19	*9	*—
Longton	48	34	*3	*1	*2	Harwood	12	27	11	*1	3
Whittle-le-Woods	28	23	*3	14	1	Chadderton	20	24	7	*1	15
Astley	12	9	*3	10	11	Garstang	8	18	*1	*2	*8
Ainsworth	15	13	*2	1	11	Pendleton	2	42	*9	22	*11
Flixton	27	16	*13	5	*9	Wiswell	40	40	6	7	*4
Great Saughall	107	27	*5	31	3	Barley-with-Wh'tly-Bth	7	35	*8	*3	*21
Chatburn	16	15	7	*15	1	Goldshaw-Booth	21	31	*7	*2	*17
Whalley	15	5	9	*12	*6	Old Laund Booth	10	23	22	1	*7
Barrowford	41	26	21	*—	9	Simonstone	13	18	11	*5	*12
Higher Booths	55	24	37	*16	5	Foulridge	24	27	8	3	*15
Ribchester	25	20	7	*9	*4	Adlington	36	63	4	4	*4
Euxton	44	14	16	*1	4	Edgeworth	30	33	25	*22	*28
Ashton-in-Mackerfield	28	20	4	*8	5	Crompton	36	37	8	*4	*5
Burscough	31	18	28	*1	11	Andlem	8	26	19	4	*2
Entwistle	28	19	4	*21	*12	Tilston	14	26	7	14	*6
Butterworth	24	14	2	*10	14						
Burnage	19	13	*1	*4	15	<i>Greatest Increase, 1821 to 1831.</i>					
Newton nr. Middlewich	27	27	8	*8	*1	Little Neston	*4	30	30	6	17
Barthomley	153	*3	*—	*6	7	New Laund Booth, &c..	2	2	11	*12	*9
Poulton-le-Fylde	20	9	1	10	*1	Orrell	6	5	20	*2	11
Rimington	22	17	—	3	*16	Buglawton	13	62	120	*11	10
Twiston	14	10	*6	*10	*19	Middlewich	4	*2	9	*6	*1
Higham &c., Booth	27	20	16	*8	*13	Tottington Higher End.	25	11	49	34	*14
Trawden	35	29	14	2	*10	Musbury	27	24	69	13	*11
Much Hoole	24	24	16	5	*1	Denton	17	26	39	23	*9
Wheelton	52	34	28	*12	*22	Haughton	34	37	40	14	*8
Blackrod	30	15	6	1	*4	Werneth	13	38	92	13	*7
Haigh	40	16	*2	7	*10	Newton near Hyde	44	49	178	25	*—
Quarltun	24	8	18	*2	*2	Great Neston	*10	6	16	4	*10
Blatchinworth	51	27	34	6	*13						
Little Heaton	27	1	22	5	*1	<i>Greatest Increase, 1831 to 1841.</i>					
Mottram	53	34	10	51	*1	West Kirby	*5	22	35	42	32
Urmstone	12	8	9	9	*5	Poulton-cum-Spittle ..	*5	22	19	74	41
Romiley	23	16	9	14	*7	Whitby	*56	233	*6	259	8
Wheelock	74	39	*4	30	*5	Wharton	18	*4	24	32	27
Frodsham L.	151	29	5	*—	*1	Whaley-cum-Yeardsley	28	47	*4	65	5
Hartford	41	16	12	15	*4	Walmersley ..	21	26	5	41	*2
Higher Kinnerton	102	6	15	1	*5	Ashworth	*12	7	5	11	*15
						Bredbury ..	26	18	18	39	*9
<i>Greatest Increase, 1811 to 1821.</i>						Godley	67	14	24	120	*3
Livesey	*5	48	7	12	33	Church-Coppenhall....	10	38	*4	55	*9
Worsthorne	*30	104	26	2	11	Thurnham	11	11	17	37	*3
Davenham	*3	20	9	18	13						
Farndon	*6	27	1	23	7	<i>Greatest Increase, 1841 to 1851.</i>					
Childer-Thornton	*14	84	*7	22	*12	Moston	*1	*3	4	9	35
Heyhouses	*7	29	*7	1	*6	Chorley	9	12	*1	18	43
Penwortham	18	21	*6	*3	8	Gorton	5	36	64	*8	85
Upholland	10	14	*—	2	8						
Knowsley ..	24	29	*1	12	14						
Longworth	*9	5	*25	*17	2						

* Decrease per cent.

TABLE IX.

COUNTRY DISTRICTS EXHIBITING DECREASE.

	INCREASE PER CENT.						INCREASE PER CENT.				
	1801 to 1811	1811 to 1821	1821 to 1831	1831 to 1841	1841 to 1851		1801 to 1811	1811 to 1821	1821 to 1831	1831 to 1841	1841 to 1851
<i>Greatest Decrease, 1801 to 1811.</i>						<i>Greatest Decrease, 1831 to 1841.</i>					
Livesey	*5	48	7	12	33	Burnage	19	13	*1	*4	15
Worsthorne	*50	104	26	2	11	Gorton	5	36	64	*8	85
Davenham	*3	20	9	18	13	Buglawton	13	62	120	*11	10
Farndon	*6	27	*1	23	7	Newton	27	27	8	*8	*1
West Kirby	*5	22	35	42	32	Middlewich	4	*2	9	*6	*1
Poulton-cum-Spittle ..	*5	22	19	74	41	Barthomley	153	*3	—	*6	7
Childer-Thornton	*14	84	67	22	*12						
Whitby	*56	233	*6	259	8	<i>Greatest Decrease, 1841 to 1851.</i>					
Little Neston	*4	30	30	6	17	Garstang	8	18	1	*2	*8
<i>Greatest Decrease, 1811 to 1821</i>						Poulton-le-Fylde	20	9	1	10	*1
Moston	*1	*3	4	9	35	Rimmington	22	17	—	3	*16
Withington	23	*2	17	22	17	Twiston	14	10	*6	*10	*19
Wharton or Winsford ..	18	*4	24	32	27	Pendleton	2	42	*9	22	*11
Heswall-cum-Oldfield ..	92	*28	27	34	29	Wiswell	40	40	6	7	*4
<i>Greatest Decrease, 1821 to 1831.</i>						Barley-with-Whitley ..	7	35	*8	*3	*21
Heyhouses	*7	29	*17	1	*6	Goldshaw Booth	21	31	*7	*2	*17
Witton	78	30	*2	2	27	Higham &c., Booth	27	20	16	*8	*13
Dilworth	64	13	*10	*3	*1	Old Laund Booth	10	23	22	1	*7
Penwortham	18	21	*6	*3	8	Simonstone	13	18	11	*5	*12
Longton	48	34	*3	*1	*2	Foulridge	24	27	8	3	*15
Whittle-le-Woods	28	23	*3	14	1	Trawden	35	29	14	2	*10
Upholland	10	14	—	2	8	Tottington Higher End ..	25	11	49	34	*14
Knowsley	24	29	*1	12	14	Musbury	27	24	69	13	*11
Astley	12	9	*3	10	11	Much Hoole	24	24	16	5	*1
Ainsworth	15	13	*2	1	11	Wheelton	52	34	28	*12	*22
Longworth	*9	5	*25	*17	2	Addington	36	63	4	4	*4
Flixton	27	16	*13	5	*9	Blackrod	30	15	6	1	*4
Whaley-cum-Yeardsley ..	28	47	*4	65	5	Haigh	40	16	*2	7	*10
Chorley	9	12	*1	18	43	Edgeworth	30	33	25	*22	*28
Great Saughall	107	27	*5	31	3	Quarleton	24	8	18	*2	*2
<i>Greatest Decrease, 1831 to 1841.</i>						Walmersley	21	26	5	41	*2
Chatburn	16	15	7	*15	1	Ashworth	*12	7	5	11	*15
Downham	14	15	*16	*30	*2	Blatchinworth	51	27	34	6	*13
Whalley	15	5	9	*12	*6	Crompton	36	37	8	*4	*5
Roughlee-Booth	16	21	*1	*18	*8	Little Heaton	27	1	22	5	*1
New Laund Booth	2	2	11	*12	*9	Denton	17	26	39	23	*9
Barrowford	41	26	21	—	9	Haughton	34	37	40	14	*8
Great Harwood	1	26	16	*7	12	Bredbury	26	18	18	39	*9
Higher Booths	55	24	37	*16	5	Werneth	13	38	92	13	*7
Ribchester	25	20	7	*9	*4	Godley	67	14	24	120	*3
Euxton	44	14	16	*1	4	Newton	44	49	178	25	—
Orrell	6	5	20	*2	11	Mottram	53	34	10	51	*1
Lowton	17	21	19	*9	—	Urmstone	12	8	9	9	*5
Ashton-in-Mackerfield ..	28	20	4	*8	5	Romiley	23	16	9	14	*7
Burscough	31	18	28	*1	11	Wheelock	74	39	*4	30	*5
Harwood	12	27	11	*1	3	Frodsham L	151	29	5	—	*1
Entwistle	28	19	4	*21	*12	Hartford	41	16	12	15	*4
Butterworth	24	14	2	*10	14	Audlem	8	26	19	4	*2
Chadderton	20	24	7	*1	15	Church-Copenhall	*10	38	*4	55	*9
						Tilston	14	26	7	14	*6
						Higher Kinnerton	102	6	15	1	*5
						Great Neston	10	6	16	4	10
						Thurnham	11	11	17	37	3

* Decrease per cent.

TABLE X.

COUNTRY DISTRICTS SHOWING THE HIGHEST RATES OF INCREASE, IN 1801-51.
IN THE ORDER OF THEIR RATES OF INCREASE IN THAT PERIOD.

		INCREASE 1801-51		INCREASE PER CENT.				
		Per Cent.	Per Sq. mile	1801 to 1811	1811 to 1821	1821 to 1831	1831 to 1841	1841 to 1851
Hoose (Wirral).....	T.	882	1472	67	14	72	127	33
Much Woolton (near Liverpool).....	"	736	2223	37	61	39	69	62
Newton (Ashton-under-Lyme District)	"	644	4775	44	49	178	25	*—
Church Kirk.....	"	530	1768	47	59	30	58	32
Pendlebury (West of Manchester)	"	529	1591	58	51	49	41	25
Weston	"	476	569	17	56	81	18	49
Great Crosby	Ch.	465	598	17	35	78	62	23
Tonge [near Middleton]	T.	439	5441	58	23	29	35	58
Whitby	"	435	385	*56	233	*6	259	8
Litherland.....	"	?	?	?	38	57	101	42
Farington	"	406	555	30	3	31	156	12
Godley	"	401	1085	67	14	24	120	*3
Worth	"	371	992	35	60	21	34	35
Sharples.....	"	347	494	57	50	25	11	36
Farnworth	"	344	2185	25	14	43	65	32
Wallasey	"	336	331	61	1	26	69	27
Droylsden [Ashton-under-Lyne]	"	305	1878	42	30	5	65	27
Gorton	"	297	1500	5	36	64	*8	85
Buglawton.....	"	297	344	13	62	120	*11	10
Kersley	"	291	2243	28	32	48	27	23
Church Coniston	"	281	84	36	23	4	96	12
Rainhill	"	279	436	36	17	6	71	31
Bollington.....	"	278	1851	23	14	56	62	7
Over	"	259	320	104	20	21	8	12
Tintwistle	"	257	119	32	17	15	26	74
Micklehurst	Ham.	257	119	32	17	15	26	13
Darcy Lever	T.	255	1780	34	21	17	52	23
Bowden	"	242	637	19	7	6	20	112
Poulton-cum Spittle	"	238	139	5	22	19	74	41
Mottram.....	"	237	1335	53	34	10	51	*1
Frodsham.....	Lordship	236	176	151	29	5	*—	*1
Great Saughall.....	T.	235	185	107	27	*5	31	3
Upton	"	221	221	*5	13	40	51	27
Moulton	"	218	299	82	5	24	31	3
Eaton	"	217	209	24	43	61	2	9
Werneth	"	216	1018	13	38	92	13	*7
Whaley-cum-Yeardsley	"	208	227	28	47	*4	65	5
Heswall with Oldfield	"	205	180	92	*28	27	34	29
Turton	"	204	434	30	17	23	40	16
Levenshulme	"	203	1348	7	14	41	13	55
Widnes	"	203	459	13	20	38	11	46
Sutton.....	"	198	622	19	10	36	29	29
Witton.....	"	197	892	78	30	*2	2	27
West Kirby	"	194	418	*5	22	35	42	32
Lytham	P.	193	220	25	12	18	37	30
Clayton-le-Moors	Ch.	191	1457	26	38	11	20	27
Wheelock	T.	190	345	74	39	*4	30	*5
Halliwell.....	"	186	710	32	25	30	9	22
Childer Thornton	"	185	183	*14	84	67	22	*12
Oswaldwistle.....	"	182	663	30	41	19	13	15
Barnton	"	178	609	19	27	19	18	30
Little Lever	Ch.	175	1402	24	17	20	16	36
Old Accrington	T.	173	1241	6	42	5	37	25
Haydock.....	"	172	341	10	14	2	39	54
Allerton	"	171	127	45	27	14	18	9
Poulton-le-Sands	Ham.	?	?	?	31	49	30	42
Reddish	T.	167	317	17	8	50	38	3
Haughton	"	167	1078	34	37	40	14	8
Musbury.....	"	165	419	27	24	69	13	11
Aspull	"	162	690	32	15	30	13	18
Great } Marsden	"	161	550	24	37	4	1	4
Little }	"					34	16	26

* Decrease per cent.

TABLE XI.

RATES OF INCREASE IN THOSE COUNTRY DISTRICTS IN WHICH POPULATION
WAS MOST DENSE IN 1801.

IN THE ORDER OF THE DENSITIES OF THEIR POPULATIONS AT THAT PERIOD.

		Increase 1801-51, Per Cent. on Populat'n in 1801.	Density Per Sq. mile 1801.	INCREASE PER CENT.				
				1801 to 1811	1811 to 1821	1821 to 1831	1831 to 1841	1841 to 1851
Failsworth	T.	69	1577	10	17	9	6	14
Royton	"	156	1287	44	26	15	1	22
Tonge	"	439	1240	58	23	29	35	58
Middlewich }	}	28	1187	14	12	9	*7	*1
Newton								
Garstang	"	15	936	8	18	*1	*2	*8
Blackley	"	48	857	1	22	4	6	9
Little Lever	"	175	801	24	17	20	16	36
Orrell	"	47	782	6	5	20	*2	11
Crompton	"	83	778	36	37	8	*4	*5
Kersley	"	291	769	28	32	48	27	23
Clayton-le-Moors	Ch.	191	761	26	38	11	20	27
Harwood	T.	61	745	12	27	11	*1	3
Chadderton	"	79	742	20	24	7	*1	15
Newton [near Hyde]	"	644	741	44	49	178	25	*—
Great Neston	"	3	730	*10	6	16	4	*10
Old Accrington	"	173	719	6	42	5	37	25
Padiham	"	113	707	21	20	15	7	19
Darcy Lever	"	255	698	34	21	17	52	23
Pilkington	"	122	689	27	22	23	2	15
Bollington	"	278	665	23	14	56	62	7
Levenshulme	"	203	664	7	14	41	13	55
Little Hulton	"	113	652	26	31	21	2	4
Haughton	"	167	645	34	37	40	14	*8
Farnworth	"	344	635	25	14	43	65	32
Clifton	"	103	634	11	29	9	7	21
Whittle-le-Woods	"	74	625	28	23	*3	14	1
Little Heaton	"	62	621	27	1	22	5	*1
Droylsden	"	305	617	42	30	5	65	27
Ainsworth	"	44	612	15	13	*2	1	11
Prestwich	"	126	608	20	25	8	8	29

* Decrease per cent.

TABLE XII.

RATES OF INCREASE IN THOSE COUNTRY DISTRICTS IN WHICH POPULATION
WAS MOST DENSE IN 1851.

IN THE ORDER OF THE DENSITIES OF THEIR POPULATIONS AT THAT PERIOD.

		Increase 1801-51 Per Cent.	Density 1851.	INCREASE PER CENT.				
				1801 to 1811	1811 to 1821	1821 to 1831	1831 to 1841	1841 to 1851
Tonge	T.	439	6681	58	23	29	35	58
Newton [near Hyde]	"	644	5516	44	49	178	25	*—
Royton	"	156	3301	44	26	15	1	22
Kersley	"	291	3012	28	32	48	27	23
Farnworth	"	344	2820	25	14	43	65	32
Failsworth	"	69	2666	10	17	9	6	14
Much Woolton	"	736	2525	37	61	39	69	62
Bollington	"	278	2516	23	14	56	62	7
Droylsden	"	305	2495	42	30	5	65	27
Darcy Lever	"	255	2478	34	21	17	52	23
Clayton-le-Moors	Ch.	191	2218	26	38	11	20	27
Little Lever	"	175	2203	24	17	20	16	36
Church-Kirk	T.	530	2101	47	59	30	58	32
Levenshulme	"	203	2012	7	14	41	13	55
Gorton	"	297	2005	5	36	64	*8	85
Old Accrington	"	173	1960	6	42	5	37	25
Mottram	"	237	1897	53	34	10	51	*1
Pendlebury	"	529	1892	58	51	49	41	25
Haughton	"	167	1723	34	37	40	14	*8
Hoose	"	882	1639	67	14	72	127	33
Pilkington	"	122	1531	27	22	23	2	15
Newton and Middlewich	Tps.	28	1522	14	12	9	*7	*1
Padiham	T.	113	1505	21	20	15	7	19
Werneth	"	216	1491	13	38	92	13	*7
Crompton	"	83	1425	36	37	8	*4	*5
Little Hulton	"	113	1386	26	31	21	2	4
Prestwich	"	125	1375	20	25	8	8	29
Tottington Lower End	"	148	1358	37	24	27	7	8
Godley	"	401	1355	67	14	24	120	*3
Witton	"	197	1346	78	30	*2	2	27

* Decrease per cent.

TABLE XIII.

COUNTRY DISTRICTS SHOWING THE HIGHEST RATES OF INCREASE PER
SQUARE MILE IN 1801-51.

IN THE ORDER OF THE AMOUNT OF INCREASE IN THEIR DENSITIES OF POPULATION.

		INCREASE 1801-51		INCREASE PER CENT.				
		Per Cent.	Per Sq. mile	1801 to 1811	1811 to 1821	1821 to 1831	1831 to 1841	1841 to 1851
Tonge [near Middleton]	T.	439	5441	58	23	29	35	58
Newton [near Hyde]	"	644	4775	44	49	178	25	*—
Kersley	"	291	2243	28	32	48	27	23
Much Woolton	"	736	2223	37	61	39	69	62
Farnworth	"	344	2185	25	14	43	65	32
Royton	"	156	2014	44	26	15	1	22
Droylsden	"	305	1878	42	30	5	65	27
Bollington	"	278	1851	23	14	56	62	7
Darcy Lever	"	255	1780	34	21	17	52	23
Church-Kirk	"	530	1768	47	59	30	58	32
Pendlebury	"	529	1591	58	51	49	41	25
Gorton	"	297	1500	5	36	64	*8	85
Hoose	"	882	1472	67	14	72	127	33
Clayton-le-Moors	Ch.	191	1457	26	38	11	20	27
Little Lever	"	175	1402	24	17	20	16	36
Levenshulme	T.	203	1348	7	14	41	13	55
Mottram	"	237	1335	53	34	10	51	*1
Old Accrington	"	173	1241	6	42	5	37	25
Failsworth	"	69	1089	10	17	9	6	14
Godley	"	401	1085	67	14	24	120	*3
Haughton	"	167	1078	34	37	40	14	*8
Werneth	"	216	1018	13	38	92	13	*7
Worth	"	371	992	35	60	21	34	35
Witton	"	197	892	78	30	*2	2	27
Pilkington	"	122	842	27	22	23	2	15
Tottington Lower End	"	148	810	37	24	27	7	8
Padiham	"	113	798	21	20	15	7	19
Prestwich	"	126	767	20	25	8	8	29
Little Hulton	"	113	734	26	31	21	2	4
Halliwell	"	186	710	32	25	30	9	22

* Decrease per cent.

OUR MOTHER-TONGUE IN OUR FATHER-LAND.

By David Buxton, M.R.S.L.

(READ 5TH NOVEMBER, 1857.)

IN introducing a philological paper for the consideration of the Historic Society, I am conscious that some apology is due from me for handling a subject which has been brought before us by such authorities as Latham and Wright, Mr. Howson, Mr. Ramsey, and Dr. Hume; all of whom have enriched our Transactions by valuable contributions in different departments of philology. Following them, I shall but be a gleaner in this field: but my familiarity with the subject of words is habitual, and a matter of necessity; it forms part of my daily occupation; and it is not impossible that, in my simple way, I may succeed, if not in making any striking discoveries, at least in presenting some facts in a new aspect; as the child's eye may chance to light upon a precious stone upon the beach, which the people of a larger growth have passed by and overlooked.

One thing which has always occurred to me as remarkable in connection with this subject, is the effect which the subjugation of a people has upon language. When the Romans conquered Gaul, they planted their language among the people whom they had subdued, though their occupation of Britain has not left above a dozen words in our vocabulary. When, at a later period, the Roman Empire was itself overrun by the barbarians of northern Europe, the effect in this contact of races was just the reverse, for the conquerors received the language of the conquered. The Norman conquest over England had the effect of adding to a language, which could not be extirpated, though the attempt was made. Why then did this attempt fail? From the same cause which has made the progress of the English so slow in the principality of Wales, though its ultimate victory over the speech of the Highlander and the Irishman, is as certain as it has already proved to be in the Western Hemisphere, where the language of the Indian aborigines only survives permanently in some Geographical designations, and in the names of some indigenous vegetables, as tobacco, potato, &c., which have found their way into other parts of the world.

Now I believe that all these various and seemingly diverse results, are to be traced to the simple and consistent action of one harmonious law, which is, that *a written language will always triumph over one which is merely oral*. The Roman tongue was organized and regulated: it had its records and monuments; these were the tests of contemporaneous accuracy and elegance; and they were also standards for posterity; while the languages which the Roman tongue displaced, were oral merely; therefore changeable and fleeting; and it was both natural and inevitable that they should soon give way before that which had the settled forms and rules of a permanent language. The same may be said of the English tongue, to account for its extension under similar circumstances. Where it has not succeeded, has been where it has come into contact with another written language—the Welsh, for instance. The Saxon speech of our forefathers had, in like manner, its ineffaceable transcripts in a living literature; and the Norman, instead of supplanting it, only succeeded in engrafting itself upon it; and that, after the Norman had itself taken a permanent form, by becoming the legal phraseology of the kingdom. Indeed the Normans themselves were but recent settlers: not native to the land from whence they came hither. Yet they came—only a century and a half after the cession of Normandy to Rollo—not with a speech which bewrayed their Gothic origin, but with the language of the land which they had successfully invaded. They had become its masters in every respect but one—*its language* (following the rule just pointed out), *had mastered theirs*—the off-shoot of the Latin tongue winning an easy victory over the rude speech of the wild and roving Northmen.

A theory of Frederick Von Schlegel's compares all the languages of the earth to a pyramid, of three degrees; those lying at the base of the pyramid being the simple and monosyllabic words of the primitive races; the second stage being composed of dissyllabic or complicated words, indicative of an advance in civilization, and of a corresponding growth in language; and those words which form the apex of the pyramid, being polysyllabic, deriving their significance from the combined richness of other tongues, and being appropriate to a high degree of civilization, and of advancement in those arts which require a technology of their own to describe them.* Applying this illustration to the more limited area of our own language

* See *Philosophy of History*, pp. 193, &c.

we find that our oldest and most familiar words—those which we derive from our Saxon forefathers—and which form, by far, the largest portion of our vocabulary—are short words, of a few letters, and often of a single syllable. They describe all familiar things, and all natural emotions. The Normans brought in a dialect of the Latin tongue; and besides the complex words which we derive immediately from that source, we obtain a great many prefixes and terminations which give to many of our words that character of the dissyllabic root which Schlegel places in the middle of his pyramid. Further, the technology of science, which marks by its growth the highest intellectual attainments, is almost exclusively Greek, and it exhibits, most undeniably, the polysyllabic form which is placed at the summit of this pyramid of languages. These successive layers, which form the concrete mass of English words, are strikingly illustrative of our national history. I shall not, however, go into any of the details which belong to this part of the subject, as many of them were very ably brought before us, during our last session, by one of the gentlemen already alluded to.*

It must have occurred to many of us to observe how considerable is the amount of useful and suggestive information to be gleaned from an examination of Geographical terms. Professor Worsaae, the great Danish archæologist, has remarked, that, in Cumberland and Westmoreland, there are more than sixty places whose names end with *by*. Yorkshire, we know, furnishes some similar instances, and our own district contains many others; but in Lincolnshire they exceed two hundred in number. Having noticed the commonness of this termination, we are next struck by its occurrence in particular localities;—on the sea coast, and particularly the Eastern coast. The inference to be drawn from this fact is a very evident one, viz., that this is a term peculiar to some nation, and that, a maritime nation; that its adventurous voyagers visited and settled upon different portions of our coast, but particularly the Eastern coast,—which we may suppose, from that circumstance, to have been the nearest and most convenient for them. And when we have thus, by a steady and progressive induction, arrived at these conclusions, we find that we have ascertained for ourselves, from internal evidence, what history tells us in

* See the Rev. A. Ramsay's paper on "Comparative Philology considered as an aid to History." Transactions, Vol IX., pp. 105–118.

so many words—that Whitby and Grimsby, Formby and Kirby, were Danish settlements: that *by* is a Danish termination: that the Danes were a nation of adventurous seamen: that they *did* make continual descents upon the coast of England, and especially upon the East coast, which was nearest to their own shores. Besides all this, Ethnology will lead you still further, and show you on the North-east bank of the Dee, where the names of Frankby and Thurstaston, Ireby and Pensby, Greasby and West-Kirby tell of the original incoming of the Danes—how the Danish physiognomy is largely prevalent still, in the light hair, and fair complexion, and marked features, of a great portion of the inhabitants.

And let us see also whether the map of England will not reveal to us something of the national character of our earlier conquerors from Imperial Rome, as well as of the later Saxon and Danish invaders. Look at the position of their fortresses. Scarcely one of them is on the sea-coast. All powerful on the land, the legions of the Cæsars never put to sea, except under the sternest necessity; they hugged the coast whenever it was possible; and when they left Gaul for the invasion of England, they leaped ashore at Dover, not because it was the best place, but because it was the nearest. On the sea, and towards the sea, they were almost defenceless—they got out of its way as if it were an enemy too potent for them to grapple with. One of Julius Cæsar's three great disasters was the loss of his transports on the Kentish coast, which only occurred through the ignorance of his people as to the nature of a spring tide. Many of the Roman stations were on arms of the sea, or considerable streams, because there they could have the advantages of water communication, without its dreaded dangers. Chester, on the Dee; Worcester and Gloucester, on the Severn; London, on the Thames; besides their camps on smaller streams,—the Don, the Exe, and the Ribble,—are all, in their several degrees, evidence of the existence of that national peculiarity in which the Romans form so remarkable a contrast to the Anglo-Saxon race, which has taken their place in the sovereignty of the earth. They sent their armies to occupy military posts: their towns were only camps: their walls were military defences: their roads were merely tracks for the march of their invading legions. We go forth to every climate where an Englishman can live (providing it be only in prosperity and in freedom) to colonize and to make homes: and to produce a New England, not merely and actually in name, as across the

Atlantic, but in very deed, along the shores of Australia and New Zealand, and in the more northerly parts of America, whose people are still bound in the same allegiance, and are loyal to the same power as ourselves.

Within the last few years, the discovery of gold in California has worked a complete revolution in that country—in its inhabitants, its polity, its national character, relations, and rank. Before that event, it was a remote and inaccessible region, cut off, as it seemed, from almost all communication with other lands. But the discovery of gold opened out the country to the skill and enterprise of the Anglo-Saxon races on both sides of the Atlantic; then California became an integral part of the great confederation of United States; and if it were not for the names of its cities and streams, San Francisco, for example, among the former, and Sacramento among the latter, little else would remain to tell of the occupation by the Spaniards of a land which Cortes discovered, but whose riches they never through long generations happened, even by accident, to stumble upon.

Take also another case on the same Continent. Florida—so called from its having been sighted on Palm Sunday—*Pascha Florida*—still introduces us by its name, to the wonderful story of the romance and enterprize of the followers of Cortes, of whose prowess and perseverance in the face of fearful and accumulated difficulties, these musical names, from the Romance tongue of the peninsula, will probably remain to tell to the remotest generations. It would be well if all the European names which have superseded the old Indian nomenclature in the western world, were equally graphic and instinct with meaning. Emerson, after remarking upon the local designations of our own land says, that his country is “whitewashed all over by unmeaning names, the cast off clothes of the country from which its emigrants came, or named, at a pinch, from a psalm tune.”* And though the Cape Colony has long since passed from the hands of the Dutch, and become a seat of British power, its geographical terms will continue to tell, should all other evidence utterly perish, of the early colonization of the South African territory by industrious and enterprising settlers from the banks of the Scheldt and the Meuse. Going back, for a moment, to America, there is the noticeable case of Louisiana, which was originally colonized by the French. The first inhabitants were emigrants from France, and their own tongue was the only language spoken. That region has now been

* “*English Traits.*”

annexed to the territory of the United States: the State of Louisiana forms one of the members of that Federal Union: the Americans have mixed with the descendants of the original settlers: and the English language has, to a great extent, displaced the French; but when all other marks of the nationality of the old settlers have died out, you will find their story repeated still in those names of the state and its capital, taken from the Royal Family of France—Louisiana and New Orleans:* and in other names, equally significant, as Dauphine Island, Lafayette, and Baton Rouge. To the Mississippi itself, was given the name of the River Colbert, after the Minister of Louis XIV; but, happily, this name has not been preserved.

An American writer, upon whose authority I give the preceding facts, (Dr. Hart, of Philadelphia), has acutely remarked that “the importance of the Norman Conquest, in its influence upon the language, is not to be estimated by the actual number of words then introduced. Its chief effect was its having *created the tendency to adopt foreign words*. There is naturally, in all nations, a strong aversion to the adoption of foreign terms. The natural and spontaneous disposition, when a new word is wanted, is to make it out of roots or stems already existing in the language, and by modes of combination with which the popular ear is familiar. The terrible shock of the Conquest, and the wholesale use of foreign words to which the people then became accustomed, overcame this national dislike, and opened a wide door for a continued influx of Latin words from a great variety of sources.”† Thus the natural prejudice of every people against the admission of foreign words was, in our case, completely overcome; and the agency by which the change was effected was such as to make it a fashionable

* La Salle descended the Mississippi to the sea; and formally taking possession of the whole new country watered by the Mississippi, from its mouth to its source, for France, he named it “Louisiana,” erected a Column and a Cross, with an inscription—“Louis the Great, King of France and Navarre, reigning April 9th, 1682.” History of Wisconsin, New France, and Louisiana, Vol. I., Chapter I., by William R. Smith, President of the State Historical Society of Wisconsin.

“Bienville had, in the Midsummer of 1718, selected the site for the Capital of the New Empire, which, in honour of the Regent of France, he named ‘New Orleans.’” Ibid. p. 82.

The work from which the above extracts are given, is one of the Donations received during the present session by the Historic Society of Lancashire and Cheshire, and is presented by the State Historical Society of Wisconsin.

+ On the study of the Anglo-Saxon language, by John S. Hart, LL.D. Barnard's American Journal of Education, Vol. I., 1856, p. 49.

and, in process of time, even a popular one. Whenever the extension of commerce, the development of the arts, or the discoveries of science, have given rise to the necessity for new words, expressive of new wants or new ideas, our custom has been, instead of fabricating them from our native resources for our own use, to go amongst our neighbours and borrow from them. Thus, as one of our own Vice-Presidents* has very admirably shown, our nautical terms are taken from the Scandinavian and the Romance languages, as spoken on the shores of the Baltic and the Mediterranean—our commercial intercourse, during the middle ages, having been carried on chiefly with those countries.

Since the Railway system has been established, we have gained a suitable nomenclature, which, besides being new in its adaptation to its present objects, exhibits a singular classification. Those terms which we may imagine to have been given by engineers and educated men, contain the classical element, as locomotive, junction, signal, terminus, viaduct, excavation, station, telegraph, buffer, &c.; but the words which are most frequently in the mouths of the working staff of the line, are Saxon, as siding, shunt, switches, rails, &c. The nomenclature of other subjects has been derived from nations noted for eminence in connection with such subjects. Thus, many of our terms of etiquette and punctilio are said to be borrowed from the Spanish; it is quite certain that nearly every one of our musical terms is Italian: and all the designations of cookery, dress, and fashion are taken from the French.

Recently the subject of Church building has attracted considerable attention; and, instead of forming one department of architecture, it has been thought of sufficient importance to be followed as an art by itself. The next step to be taken was to find a distinctive name for this special knowledge, and at once we betook ourselves to the Greek, and culled a new word, ecclesiology, which with its adjective—ecclesiological, and noun-personal—ecclesiologist, is now in common use. In the Law, it may naturally be expected, that its technical and descriptive terms will speak of the source of our system of jurisprudence. They do so. Judge, justice, baron, jury, counsel, advocate, plaintiff and defendant, accuser, prosecutor, culprit, convict, indictment, verdict, acquittal, conviction, sentence, condemnation,

* Rev. J. S. Howson on the History of Naval Terms, Parts I. and II. *Historic Society's Transactions*, Vols. V., p. 176, and VI., p. 136.

with many others more distinctly marked with the stamp of a French currency, shew that ancient Rome gave us the basis of our legal code, as well as one principal element in our language.

In like manner, all the words of common use in analysis and criticism, are classical, many of them being Greek, and this is the case with nearly all the terms employed in science. We have an instance of this in a fact familiar to us all. A word which had once described a matter of scientific discovery, of real utility, but of limited use, comparatively, became—in the case of the old Telegraph, to which I allude—applied to another improved and common form of communication, dissimilar in all its features, but directed to the same end. The things were different, but we have no alteration of name. “*Telegraph*” described the old line of signals from St. George’s Pier to Holyhead, and “*Telegraph*” equally describes the wonderful modes of transmission which electricity has brought into common use. But the necessity of having a single word to describe the thing written, has lately asserted itself, and we have had introduced amongst us, amid the din of a fierce controversy, the word *Telegram*. I am not disposed to criticize the word, but to accept it. “The word is well-culled, choice; sweet and apt, I do assure you, Sir.” *

None can deny that it obviates an inconvenience, and supplies a want. The system by which the English language has attained to its present copiousness has not been by making every borrowed word follow the grammatical structure of the language from which it has been derived, but *by adapting it to the forms of our own language*.† The purists who condemn “Telegram” should, to be consistent, go much further, and try to establish a principle, instead of carping at an exception. They would, however, speedily find, that the strict application of their rules to the English tongue would be utterly impossible; and even if it were possible, it would be perfectly useless.

We sometimes hear it said against us, that the educated Irish and

* Shakspeare. *Love’s labour lost*, Act V., Sc. I.

† Bishop Lowth, correcting a criticism of Bentley’s on Milton, in which a Latin rule is quoted to show that an expression in *Paradise Lost* is wrong, says,—“This comes of forcing the English under the rules of a foreign language with which it has little concern; and this ‘*ugly and deformed fault*,’ to use his own expression, Bentley has endeavoured to impose upon Milton in several places.” Lowth’s *Introduction to English Grammar*, p. 135. London, 1787.

Americans speak better English than we do. We are naturally disposed to smile at an assertion which seems to bear absurdity and self-contradiction on the face of it. But if we look closely at the facts, we cannot fail to see that there is a certain sense in which the statement is perfectly true. Let us remember that the original peopling of North America, by the English, went on uninterruptedly, from Elizabeth to the fall of the Stuarts, under leaders such as Sir Walter Raleigh and William Penn; and that this period in our history was also the most brilliant epoch in our literature: that which begins with Shakspeare, and ends with Addison. The settlement of the Englishry in Ulster took place during a portion of the same time; and it is not difficult to see, that if the inhabitants of these regions have been unaffected by the causes which have deteriorated and corrupted the spoken language of this country, their speech, which was derived from sources of such unquestionable excellence, must be purer than our own; for ours, besides being injured by the introduction of foreign phrases and idioms, and deteriorated by ignorance, has been defiled by vulgarisms, cant colloquialisms, and slang phrases, which derive all the little meaning they possess from their connection with personal, local, or temporary circumstances. These are confined to ourselves, and cannot reach either our fellow-subjects in Ulster, or our more distant relatives across the Atlantic; wherefore, it is not, after all, so absurd as it seems, to say that educated Irishmen and Americans sometimes speak better English than the English themselves, seeing that they speak the speech of their fathers, kept pure by the language of literature, while we are subject to deteriorating influences from which they are comparatively free.* On the

* In the Westminster Review for October, 1834, I find the following curious statement:

“In the County of Wexford there are certain districts called the English Baronies, from their having been, in the fifteenth century, peopled by English adventurers. Their descendants continue to the present time to use the language of their ancestors, having intermixed very little with the surrounding Irish; and they converse almost exactly in the words of Chaucer. They are nearly the only persons in the world (excepting some few black-letter gentlemen) who are able, thoroughly and easily, to understand and relish the ancient poet. Camden mentions these settlers, as speaking the ancient English, about the beginning of the seventeenth century.”

I give this extract as bearing upon the point under consideration, having opportunely met with it after the preceding observations were written, and, still more recently, with another paper, to which I also beg to refer—“*On the Irish Dialect of the English Language*,” by the Rev. Dr. Hume, in the “*Ulster Journal of Archæology*,” No. 21, January, 1858, pp. 52, 53.

other hand, they are exposed to disadvantages of their own, which, though not identical with those just alluded to, are not the less to be regarded as blemishes, by such of us as wish to have their mother-tongue spoken, as well as written, with correctness, elegance, and purity.

That is a wish which should be common to us all; and a purpose for which we should all heartily strive. But proud, and justly proud, as we all are of our native country, I very much doubt whether we are as proud of our native tongue as we ought to be. And yet it is surely a noble heritage. In this language it was that Bacon poured forth the loftiest wisdom, and Shakspeare sang his woodland minstrelsy, or spoke out of the "depths" and "tumults of the human soul": this was the means whereby Milton revealed his high imaginings of more than ear hath ever heard, or eye hath seen: and in this mother-tongue of ours it was, that Jeremy Taylor poured out his soul in deep devotion, or with a thrilling eloquence of speech and wondrous power of thought "vindicated the ways of God to man." To every succeeding generation it comes laden with new riches, and ever increasing interest: it is endeared to us all by a thousand tender associations, and early memories: wherefore, while we joyfully take a patriotic pride in our glorious FATHER-LAND, let us learn to value as we ought, our matchless MOTHER-TONGUE.

FURTHER REMARKS ON THE HISTORY OF THE TWO COUNTIES, AND ITS MATERIALS.*

By John Robson, Esq., M.D.

(READ 4th MARCH, 1858.)

In resuming the important subject of the early state of Lancashire and Cheshire, I need hardly remind you that in the first period, that of Roman dominion, the single positive fact which we find in history is, that Devana, now Chester, was the settlement of the twentieth legion. We have also the names of some post stations, and this is all. Who or what the people were—how they were conquered—how they were governed—everything belonging to our ancestors as working and intelligent men—even the recovery of their independence, is to be sought for in the general history of the country; and if we wish to gain a more particular knowledge of our neighbourhood, we have to learn it from those vestiges of art and industry which time has left us, and which cultivation is fast sweeping away.

Before proceeding to the more especial subject of this evening's paper, I would draw your attention to an event detailed by Tacitus, in his life of Agricola, which I am not aware has been hitherto localized, if you will allow me the expression, but which I think could only have taken place at Chester, and is so far important as bearing upon a very early Roman settlement in the neighbourhood.

The Roman general, Ostorius, in the year 50, advanced against a tribe called, by Tacitus, the Cangi, whose territory extended to the Irish sea,† but he was called back by some disturbances amongst the Brigantes. One of his successors, Suetonius Paullinus, in 61, reached the Menai Straits, when the insurrection of Boadicea broke out; and amongst the troops with which he marched from North Wales towards London,

* See vol. vii., p. 99.

† Ptolemy names the promontory of the Cangani, which is generally considered to be the Great Ormshead; and we have also pigs of lead from the same neighbourhood, with the name Ceangis, A.D. 60.

Tacitus tells us, were the *Vexillarii* of the twentieth legion, evidently showing that the legion itself was left behind. In the time of Ptolemy, it was fixed at Chester; but there can be little doubt that Chester was already a Roman settlement; and that Paullinus, leaving the main body there, and so disposed as to keep up his communications, took with him that portion called the *Vexillarii*, who having been a certain period in the service, were favoured troops, still attached to the *Vexillum* or standard, but called into the field only under especial circumstances.

Twenty-two years after this, A.D. 83, Vespasian had become Emperor, and Agricola, the governor of Britain, was engaged in the Highlands of Scotland. During the summer, a cohort of Usipians, who had been enrolled in Germany, were sent over into Britain for the purpose of being trained and attached as auxiliaries to one of the legions. A few Roman soldiers were placed in each company to act as models and teachers, and the whole was under the command of a centurion. These men, probably not liking the drill, killed the soldiers and their commander, seized three galleys, and, before any thing was known, in a wonderful manner got out to sea. One of the pilots made his escape, and fearing that the two others would betray them, they put them to death. The beginning of the voyage was fortunate, but afterwards they were at the mercy of the wind and tides; and when in want of provisions were forced to make attacks on the country people, being generally successful, but sometimes defeated. At length, suffering the extremity of hunger, they devoured the weaker amongst themselves, and then cast lots who should die next. They thus sailed round the island; and having, from ignorance of navigation, lost their vessels, they were taken as pirates, first by the Suevians and then by the Frisians, were sold as slaves, and some finally brought as such for sale on the left or Roman bank of the Rhine, where they related the wonderful adventures they had passed through.

I have shewn the great probability that Chester was already not merely a Roman garrison, but the head quarters of the twentieth legion, so that there would be nothing unlikely in the foreign auxiliaries which were to join it being sent there to go through their training. But if at this period the Romans did not occupy Chester, they would have had no post at all on the western coast; and it is impossible to conceive these men leaving Richborough or Porchester, and sailing round the island to reach Sweden

or Holland. We know, too, that the year before this, Agricola had ships in the Irish channel, though his great fleet was on the eastern coast, from which side it is said to have circumnavigated the island the following year.* When the men, however, got out to sea, supposing they sailed from the Dee, they must have been well aware that their best chance of escape was to keep to the north; but their vessels not being provisioned for such a voyage, they were under the necessity of landing and getting supplies as they could, till they were driven to the coasts of Sweden and Holland. We may remark also that amongst the numerous foreign troops that are named as being stationed here, we never meet with any Usipians.

The long period of six centuries and a half intervening between the expulsion of the Romans and the arrival of William of Normandy produced immense changes; and these become the more interesting to us as there is an evident tendency at work in minds, which certainly are altogether ignorant of the historical facts, to bring back some parts of the old organization. It is evident that, without a knowledge of these changes, our history will be, what we find it in Hume; and I shall now proceed with some remarks upon such of the materials as are connected with our own counties.

I have an objection, *in limine*, to the term "Saxon," which has been given to this period. As far as regards our own neighbourhood, I may express a strong opinion that, under no circumstances, did any Saxon tribe ever settle here. This follows, even allowing the legendary account of Beda, who never brings his "Saxones" to the north. Here they were, in their own language, always *English*, while the Saxons, more properly the *Sexe* or *Sexna*, were confined to the south-east and southern coasts of the island. In his time the island was called ENGLALAND, the inhabitants English—speaking among other languages the English, but never the Saxon. The term Anglo-Saxon is more delusive; for, if we find a relic of this period within the limits of the Sexna, it clearly, *prima facie*, belongs to them, as Alfred's Jewel; while anything found out of those limits, and amongst the Teutonic family, as St. Cuthbert's cross, will be as clearly English; but there cannot be any double ownership, and the name Anglo-Saxon can only lead to a confusion of everything in history and archæology.

* Dio Cassius says that Agricola had heard of the exploit of the Usipians, and hence his order to sail round the island, which was the first time the Romans had accomplished it. HIST. ROMAN., Lib. lxvi., c. xx.

The Chronicle commences with the statement, that there were five different nations in the island: English, Welsh, Scottish, Pictish, and Latin; and this appears to have been taken from Beda. Alfred, 870, translates the *Historia Ecclesiastica* out of Latin into English; but instead of nations, calls them languages, still taking no notice of the Saxon. In one of the homilies, on the martyrdom of St. Alban, the persecution of the christians is described as extending from the continent to Englaunde. If we turn to the *Codex Diplomaticus*, we find the kings describing themselves as of the people—"Rex Merciorum," "Cantuariorum," "Westsaxonum," and so on. Athelstan, the grandson of Alfred, is the first who takes the title of "Rex Anglorum." In a Charter of Canute, 1018, he styles himself "Imperator Knuto regiminis Anglici in insula potitus;" and the church at Canterbury is "omnium ecclesiarum regni Angligeni mater;" in the next he signs himself "Ego Cnhut Britanniae Anglorum monarchus." Edward, in 1045, is styled "Edwardus gratia Dei industrius rex Anglorum omniumque insularum in circuitu persistentium." In an English document belonging to Edward, without date, but as Stigand is named Archbishop, it must have been written towards the close of his reign, we have "Ich Eadward, king of Engletheode."* In No. 853, he makes Ramsey Abbey toll free "over all Engleland;" and at this period we have the shires much as they are at the present day. There are instances, but they are very rare of "Rex Angelsaxonum;" but this combination is intelligible enough when applied to two nations united. We speak of the Anglo-French army or fleet, but not of an Anglo-French ship or sword.†

The existing relics of this period, in a material form, are few, and at present hardly available for historical purposes, as they have never yet been properly examined. Good service would be done by a systematic survey of the line of fortresses in North Cheshire, which are said to have been erected by Edward and his sister Ethelflæda, at the beginning of the tenth century. But these works, extensive as they are, form only a portion of what they are said to have constructed; and I am not aware that any thing has been done to distinguish the work of that period from that of an

* COD. DIPL., No. 844, 850.

† The title of the Saxon Chronicle is of very recent introduction—it is not named in the MSS., and it was first printed under the title *Chronologia Anglo-Saxonica*. As it records the events both of the Wessexians and the English, the proper name would be, *The Anglo-Sexian Chronicles*.

earlier or later time. Our archaeologists have paid great attention to Roman and Norman antiquities—to pure English, little or none.

But our written evidences are numerous and valuable. It will be sufficient for me at present to refer to the *MONUMENTA HISTORICA BRITANNICA*, published by government, and containing most of the original histories of the kingdom to the Conquest. Here we have Beda in the eighth, and the Saxon Chronicle in the ninth, tenth and eleventh centuries, with some other contemporary annalists, but unfortunately leaving much to be wished for. Kings and bishops are put to death or driven into exile, and battles are fought, and men, with a name, die, and so we find it recorded. But why the people rose against the recognised, if they were recognised, authorities; or what led two tribes to battle: or what came after the battle: or what such an ealdorman had done to be named in death, who is not mentioned during his life, is what we look for in vain. Beda's history is strictly ecclesiastical; we find in it the succession of bishops and of abbots and the conversion of kings and their people. But if we take away the miracles and the visions, there is little that gives us an insight into any part of the life of the people; and Beda was so thoroughly a party man, that, as I shall have occasion to shew hereafter, little dependance can be placed upon his statements.

Besides the “*Monumenta*,” government has also published, in another folio, the “*Ancient Laws and Institutes*” of the kingdom, forming, with the “*Chronicle*,” the most valuable *Corpus Historicum* possessed by any modern kingdom in its own language. But this is not all; for we have moreover a large number of contemporary charters and private documents from the year 600; at once both the record and example of the progress made by the nation during that period. These valuable documents, if not absolutely unknown to our most popular historians, were hardly available. Many, it is true, had been published in Dugdale's *Monasticon*, *Reyner's Apostolatus*, and elsewhere; imperfect copies of the early laws had been printed, but it was not till the labours of Kemble, Stevenson, Thorpe, and other learned men in England and Germany* had placed them fairly before us, that they could be said to be accessible, or that much use could be made of them.

* I would refer more particularly to Dr. Reinhold Schmid's work, “*DIE GESETZE DER ANGELSACHSEN*.” *Leipsic*, 1858: a work of great interest and importance.

From the tenth century we possess, what is in many respects equally important, a national literature, which, however deficient in itself, becomes invaluable as a photographic reflection of the people. That this should have been preserved at all during the terrible period of the Danish invasions under Cnut; and that property should have been then occasionally involved in most complicated meshes of law, the details of which are minutely given, are matters that may well excite our wonder. Some writers have expressed an opinion that we owe much to the Danish, and still more to the Norman invasion—I fear that all such ravages are an unmitigated evil, and certainly prevent the national progress, if they do not actually send the people back into barbarism.

It is by no means easy to free the mind from all the ideas that belong to the age in which we find ourselves, and it is still more difficult to fill up the centuries that intervene between one historic epoch and another. Few people have any definite notions of the age of “good Queen Bess;” still less of 300 years before that, or how things were managed in the days of King John and Magna Charta; and as to the period before the Conquest, I do not hesitate to say, that it is far more difficult to appreciate than the state of Rome at the time of Cæsar. To realize a state where the land belonged to every freeman, and of course, when there was no private property,—where there was an equality of rank, and no one could assume either power or privilege above his neighbour—this is the first step in English history. To trace the advance of the kingly power, the rise and progress of an aristocracy of the “comites,” *companions of the king*, as distinct from the *freemen of the mark*, is the second; and the third is, to understand the process by which the common land of the mark, the *folc-land* as it was called, became gradually transferred to these comites, earls, servants and companions of the king, as *boc-land*, and so lost to the people. The original organization, the Mark system, had in itself, as Kemble tells us, its own elements of decay. Every Mark—and I believe in our neighbourhood, they are still represented by our parishes—was a little republic, owing neither suit nor service nor tribute to any other, nor subject to any special ruler. In the course of 600 years, the folc-land, the property of the commonalty, had become boc-land, the private property of individuals, and was even said to be held of the king in fee as the real owner of the whole. Without a thorough appreciation of these facts, we shall make little progress in our study of English History.

But there were also religious differences at work for most part of the time. First, we have the old heathen population; then the early converts to Christianity—constituting the first British Church—having no immediate connection with, or dependance on Rome, and holding certain peculiar notions about the proper time of celebrating Easter and the right form of shaving the priests' heads; and thirdly came the missionaries from Rome—gradually making their way, and in about 400 years establishing the full supremacy of the papal see. Beda belongs to this class, and important as his Ecclesiastical History is, it is really a very partial and unworthy work. I do not speak of his miracles and visions and legends—they belonged to the time—but no body can doubt that the real point in dispute between the British Clergy and Augustine was the acknowledgment of a foreign supremacy, which Beda carefully ignores. He lays great stress upon the British Clergy refusing to join the Roman Missionary in converting the Saxon, and yet he tells us that it was not till 681—three generations after Augustine's arrival in Kent—that the inhabitants of Sussex were converted by Wilfrid, who had been expelled from the bishopric of York. The King and Queen had been previously baptized, and there was already a small monastery of Scottish monks at Bosham, near Chichester, "who served the Lord in poverty and humility," so that we can hardly give the Roman Missionaries credit for much zeal or sincerity. Be this as it may, these religious differences, and what would appear to be continual attacks upon the opinions and property of the people, would also operate in exciting the minds both of those who were introducing the new order of things, and of those who were opposing it.

I shall now proceed to that portion of the Chronicle which is most interesting to us, as containing an account of events which took place in our own neighbourhood. During the latter half of the ninth century we have little more than the records of battles between the Danes and West Sexna, whose kings then ruled over all the people south of the Thames. From time to time attacks had been made upon the coast, but in 866 it is said a large heathen army came into England (*Angelcynnnes lond*), and fixed their winter quarters in East Anglia, where they were soon horsed, and the inhabitants made peace with them. In 868 this army was attacked at Nottingham by the forces of the West Sexna,* but the chronicle says there was no great battle, and the Mercians made peace with them. They are described as destroying the monasteries, but there is no contest between

them and the people, and in 871 they reached Reading, in Wessex. This was the year of Alfred's accession, and in seven years afterwards the West Saxna are described as being completely subdued, and Alfred had to take refuge in Athelney. In a few months, however, he was once more making head against them, and in 886 he had not only recovered his own dominions, but we are told that the whole English nation (*Angelcyn*) turned to him, except that part of it which was held captive by the Danes. If we compare these wars with those at the end of the next century and the beginning of the eleventh, we find a marked difference. The Danish chiefs are generals, commanders of the army, but there is no assumption of the kingly power or title. In winter they are quartered in the cities, which were fortified, independent, under municipal government, and as decidedly opposed to the West Saxna as they were friendly to the so-called Danes. It must be remembered that we have only the Wessexian history of the contest, and if we wish for a more complete one we must take the other point of view also; it seems, in fact, to have been a great contest between the *Sexe*, all of whom, south of the Thames, had fallen under the power of Wessex, and the *Engle*, the English. The kings of the West Saxe had been long establishing and consolidating their power, and of course the "Mark" system had been suffering proportionately. Besides this, the clergy had become powerful auxiliaries to the royal cause, and their endowments seem to have been upon a liberal scale. The father of Alfred is said to have given them a tenth part of his possessions or dominions, it is not very clear which. Folc-land was being very rapidly converted into Boc-land, and this increased the power of the king and his comites, by the very means which rendered still weaker the old possessors. The kings of Wessex were making way in Mercia amongst the English, and after a severe struggle, lasting over seventy years, Edward, the son of Alfred, had become master of the country as far north as the Mersey. I believe we shall have a much clearer view of this long contest if we look at it as one between the Saxe under a kingly government, and the English under the Mark system, in which the latter was finally abolished, and the two nations united in one, the king taking the title of the King of the English; previously he had been King of the West Saxna.

The events of the year 894 are given in considerable detail in the Chronicle, much more so than is usual; but as far as possible I must restrict my remarks to what concerns ourselves. We are told that the Northum-

brians and East Anglians had given oaths to Alfred, and the latter, six hostages also; and nevertheless, contrary to their plighted troth, as often as the other armies went out, they also went out, either with them, or on their own part. The king had divided his forces, so that one half was constantly at home, the other half in the field. Alfred first attacks an army which had been harrying Wessex, defeated it at Farnham, and drove it over the Thames. His forces still following it, besieged it as long as their provisions lasted. In the mean time a large fleet had reached Exeter, and Alfred, with the best part of his troops, hastened thither; but the enemy retreated again to their ships. The rest of the forces, with a body of Londoners, took and destroyed a fort at Beamfleet (? Benfleet in Essex), their ships included. Another army of East Anglians, Northumbrians, and Danes, advanced up the Thames, and then along the Severn to Buttington.* Here they were attacked by the king's Ealdormen and Thanes, who had gathered some forces out of Somersetshire, Gloucester, and North Wales, and besieged for many weeks. At length they were compelled to fight, and the Christians had the victory; that part which got away thence was saved by flight.

“When they had come into Essex to their fortress and to their ships, then the survivors again gathered a great army from amongst the East Angles and the Northumbrians before winter, and committed their wives and their ships and their wealth to the East Angles, and went at one stretch, day and night, until they arrived at a western city in Wirral, which is called Lega-ceaster. Then were the forces unable to come up with them before they were within the fortress; nevertheless they beset the fortress about for some two days, and took all the cattle that was there without, and slew the men whom they were able to overtake without the fortress, and burned all the corn, and with their horses ate it in all the neighbourhood: this was about a twelve month after they first came hither over the sea.

“895.—And then soon after that in this year the army from Wirral went among the north Welsh, for they were unable to stay there; this was because they had been deprived both of the cattle and corn which they had plundered. When they had turned again out of North Wales, with the booty which they had there taken, then went they over Northhumbria-land and East Anglia in such wise that the forces could not overtake them before they came to the eastern parts of the land of Essex, to an island that is out on the sea, which is called Mersey.”

Such is the history of the year 894, as given in the contemporary chro-

* There is a Buttington on the Severn, on the borders of Montgomeryshire.

nicle, and you have the facts connected with the Danish irruption into Cheshire, North Wales, and Lancashire. It was evidently the object of the army to get to Chester before the forces of king Alfred, and it seems they succeeded. This was after the usual summer fighting; the campaign had been unusually busy and unfortunate for the English army, and winter was setting in. They appear to have crossed the Mersey early in spring, and made their way back through Lancashire to their own country.

We have here a most remarkable narrative, especially important to our own neighbourhood, but plain as it seems, it has led to the most contradictory statements. I am not aware of any two interpreters agreeing as to the facts which it professes to describe; and any one who is curious in the matter may refer to the early volumes of the Transactions of the Society, to see some of the interpretations which have been given. It is, however, referred to especially in support of the supposed Danish settlements, which some archæologists have placed in this neighbourhood, and I believe that there is no direct evidence that the Danes ever were here except upon this occasion. It has been said already that we are not to suppose that these Danish armies were entirely composed of natives of Denmark, or that they were foreigners at all. The army here, which is so frequently named, was acting in connection with the Danish fleet, but I believe they were real Englishmen (the Chronicle expressly calls them Northumbrians and East Anglians) contending for their original rights and property, against what they must have considered usurpation and innovations. They had fought in Mercia, and been defeated; the real Danes also had suffered loss both at Beamfleet and Exeter, and as was usual all seem to have gone into winter quarters; at any rate the "here" had retired into East Anglia, when, without any reason assigned, they hurried by forced marches, at a stretch, night and day, across the island to Chester. Now the only way that I see to account for this sudden enterprise is to suppose that when they got home, after the summer campaign, they there learned that Alfred's troops were advancing upon Chester, probably those which had defeated them at Buttington.

That the kingdom of Wessex had been gradually extending itself, and continued to do so for years after this, the Chronicle bears ample testimony. The cities, as I have already stated, were English. The "army" seems to have been always welcome to them, and we have no reason

to think that Chester had different views or interests. We may then understand that the intelligence they got in East Anglia at once despatched them to that city, and it appears that their effort was successful, and that the "fyrd," the forces of Alfred, were shut out. These, however, ravaged the country round about, destroyed the cattle and the corn; and it must be remembered that this was in Mercia, across which the army had just marched, and over which Alfred had assumed a nominal authority. The army, however, was safe within the walls, and the forces, after a couple of days, withdrew, apparently to Wessex. We are then told that for want of provisions the army made an incursion into North Wales, whence part of Alfred's forces had been drawn, and obtaining some booty there returned through Lancashire and Yorkshire, giving no opportunity to the king's forces to attack them. Chester appears to have kept its independence for the time, though it, with other cities, fell under the power of Wessex a few years after. We are told that it was repaired in 907, when, no doubt, it was taken by either Edward (Alfred's successor) or his sister Ethelflæda. In 912, Edward took possession of London and Oxford, and all the lands that belonged to them. The same fate befell Derby in 917,* and in the following year, "in the early part of the year, by God's "help she got into her power, by treaty, the burh at Leicester, and the "greater part of the army, which owed obedience thereto, became subject to "her. And the people of York had also covenanted with her, some having "given a pledge, and some having bound themselves by oath, that they "would be at her command." "Before Martinmas king Edward went with "his forces to Buckingham * * and Thurcytel the earl sought him to be "his lord, and all the 'holds,' and almost all the chief men who owed obedience to Bedford, and also many of those who owed obedience to North-"ampton." I might read you the annals of successive years, containing similar accounts, confirming what I have already stated as to the independence of the cities and marks, and the slow and gradual advance of the kingly power. In the real Danish invasion, which took place at the end of the tenth and beginning of the eleventh century, all was changed; the cities were especial objects of attack and pillage, and one of the most severe battles with the Danes was fought by the East Anglians. There is, in fact, between these two contests all the difference that exists between a domestic war and a foreign invasion.

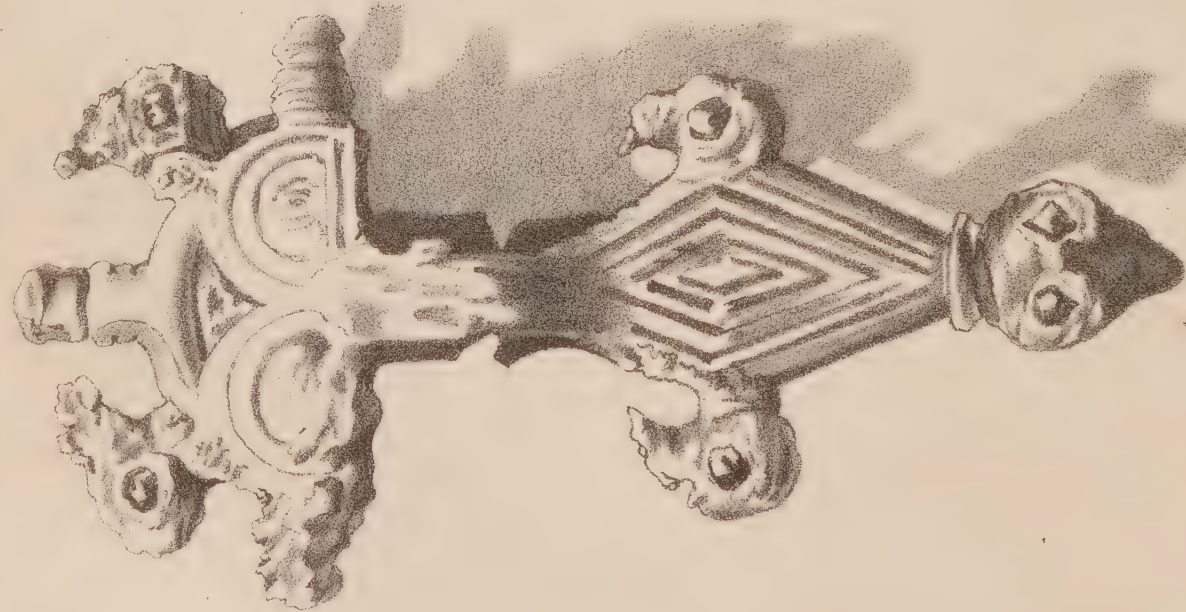
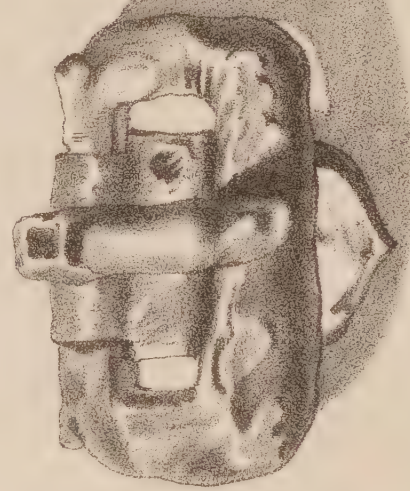
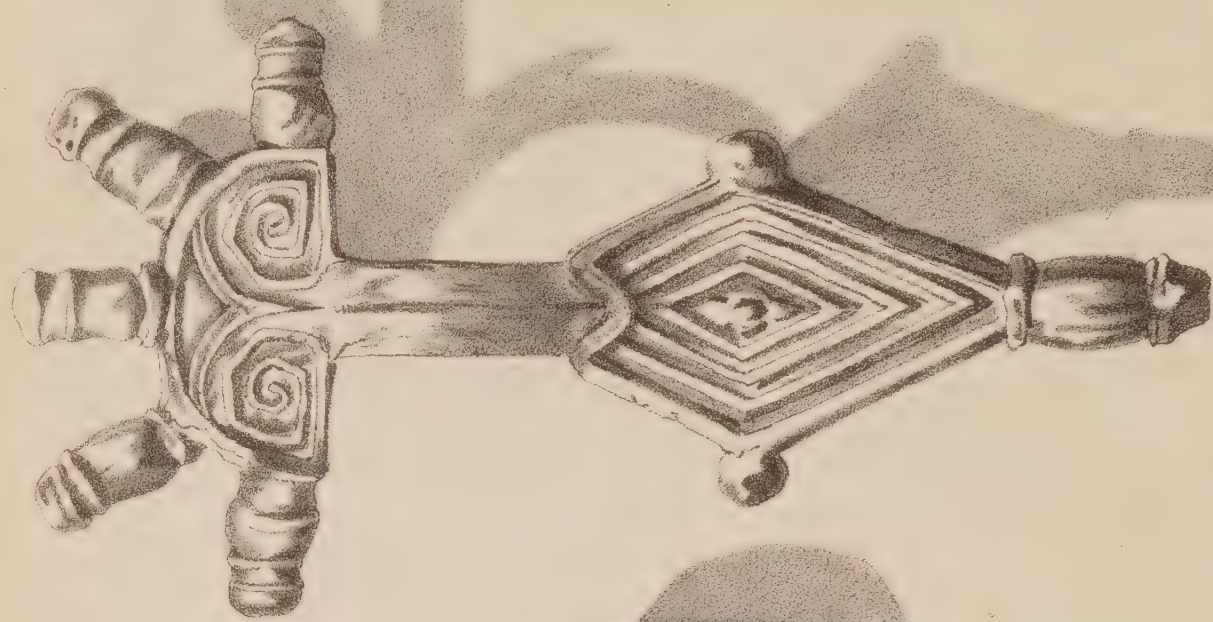
* "This year, before Lammas, Ethelflæd, lady of the Mercians, God helping her, got possession of the burh which is called Derby, with all that owed obedience thereto."—SAX. CHRON.

We find this still further borne out by the peculiar expressions used by the chronicler; you have remarked that the king's forces are called the "fyrd," while the Danish troops are always named "here," the army. In the laws of Ini, which date in the first quarter of the eighth century, and belong to the West Saxons, we are told that a body of men up to seven are *thieves*, from seven to thirty-five they are *hloth*, and above thirty-five they are *here*; and in connection with these nouns are the corresponding verbs to *thieve*, to *hlot*, and to *herry* or *harry*. The second of these words has a curious similarity to one that we have been lately made rather too frequently acquainted with in Indian news—to loot. Each of these crimes requires a peculiar form of compurgation, and are alike under the law. The fyrd was the king's military levy, called out every year for a certain period, each man finding his own arms and provisions.

I must now leave it to yourselves to decide the extent to which the Danish influence could have prevailed in West Derby or any other part of Lancashire or Cheshire. Whatever conclusions you may draw as to the correctness of my interpretation of the march from East Anglia through Mercia to Chester, it is quite clear that no part of the army made any settlement here; and though Alfred's successor extended his actual kingdom to the Mersey, it made no further advances at that time. A series of forts, including Chester, Edisbury, Runcorn, Thelwall, Warburton and Manchester, are all ascribed to Edward and Ethelflæda,* and it is long before Lancashire is named in the original historians of England.

You will excuse my dwelling so long upon this subject, as it is really the most important event that appears in our county history before the Conquest, and I must now bring this paper, which I fear has been very tedious, to a close. All that can support the writer, or encourage his hearers in these minute inquiries, is the certainty that a more accurate knowledge will come from closer investigation, and we are sure that every right-minded man is interested in the history of his birth-place or his home.

* Ethelflæda built Edisbury, Warburton and Runcorn in 915. Edward constructed the burh at Thelwall, and repaired and garrisoned Manchester in 923.



ON THE SO-CALLED ANGLO-SAXON ANTIQUITIES DISCOVERED NEAR KERTCH, IN THE CRIMEA.

By C. Roach Smith, Esq., (in a letter to Joseph Mayer, Esq.)

(READ 3RD DECEMBER, 1857.)

The attention of students of our Saxon antiquities was naturally attracted, some months since, to statements, which appeared in most of our leading papers, respecting some of the objects excavated by Dr. Macpherson, and now deposited in the British Museum. It was said that they were Anglo-Saxon; and moreover, in order to account for the apparent paradox involved in their appearance on the banks of the Bosphorus, it was suggested that they probably had belonged to soldiers of the Varangian guard, which, as you know, was drawn from the north of Europe, and from the tenth century served, over a considerable period, as a body-guard to the Byzantine emperors. Before I had seen the objects, I expressed a strong conviction both that the appellation of Anglo-Saxon was misapplied, and that the notion of referring them to the Varangian guard was equally untenable. Having inspected the remains I am confirmed in my opinion.

The fibulæ are the objects which have led to the above decision. They are of two kinds, of the types headed "Germany" and "England," in plate L, vol. ii. of my *Collectanea Antiqua*; and in plate XVIII, vol. i. of the same work. The former are rarely found in England; the latter abound in Essex, in Norfolk, in Warwickshire, in Northamptonshire, and in other parts; but you will not find, I believe, a single example in your Kentish collections; and only one specimen of the former kind, which is in Mr. Rolfe's gatherings from the Osengal cemetery.* Another example from Kent,† that mentioned above as published by me for comparison with the German, exhausts, so far as I can at present recollect, the number found in this country. This kind of fibula may be termed radiated; the more common, cruciform.

* It is figured in vol. iii. plate VI. fig. 2, of the *Collectanea Antiqua*.

† See *Antiquities of Richborough, Reculver, and Lymne*, for the ornaments and urns found with this fibula, and my remarks on them.

Now after what I have said, it will be obvious that there is a similarity between the fibulæ from Kertch and some which are found with Anglo-Saxon Antiquities, and which have been, and yet may be, called Anglo-Saxon. But it by no means follows that those from Kertch have an Anglo-Saxon, or even a Teutonic origin. On the contrary, it seems to me a rational sequence that the very reverse should be nearer the truth; and that while works of ancient art found in the neighbourhood of Byzantium are in no way likely to be derived from the far north, those of the north may be expected to have been strongly influenced by the fashion of the east.

Had it been necessary to account for the presence of Anglo-Saxon antiquities, such as these fibulæ, in the east, we need not look to so late a period as that of the Varangi: we have evidence of Saxon and other German soldiers quartered in the Oriental parts of the Roman empire centuries earlier, from whom, with more probability, they might have been presumed to be derived.

In referring these objects, as I am disposed to do, to a late Roman or Byzantine manufacture, I can only repeat what I have long maintained, namely, that we must study our Saxon antiquities beyond the shores of Great Britain; and fully to comprehend the influence which has guided the peculiar forms and patterns of the ornamented fibulæ, and other personal decorations, we must trace the antiquities themselves in the parent countries; and then we must study contemporaneous remains in Italy and further eastward. At present this has not been attempted: unhappily the very few who have devoted themselves to the study of our National Antiquities are hardly in the position to undertake tedious and expensive journeys, such as would be indispensable; and our Governments have not yet patriotism enough to give encouragement to such researches.

NOTES ON THE CLASSIFICATION OF HUMAN KNOWLEDGE,
WITH ESPECIAL REFERENCE TO THE METHODS WHICH
HAVE BEEN ADOPTED, OR PROPOSED, FOR THE
ARRANGEMENT OR CATALOGUING OF
LIBRARIES.

By Edward Edwards, Esq.

(READ 11TH MARCH, 1858.)

FOR the earliest attempts at the Classification of books, of which precise accounts are now attainable, we must look to the yet remaining mediæval Catalogues of Monastic Libraries. Even in those parts of Europe wherein revolutions of Religion have had but a very restricted operation,—as compared, for example, with our own country,—intestine conflicts, popular riots, or foreign wars, have dispersed collections which had been laboriously gathered by the efforts of many successive generations of monks. Such collections, whatever may seem to us their intrinsic worth, must unquestionably have considerable value as elements in the history of Civilization. It is, therefore, matter of reasonable gratulation that although very few Monkish libraries of an early date have descended to modern times, otherwise than piece-meal, we still possess not a few of the catalogues of such collections, taken in their prime. But many of the best of them remain yet unprinted.

Here, however, we are concerned with these Catalogues only as respects the illustrations they afford of the manner in which mediæval men were wont to group together the subjects of human knowledge as embodied in the books that stood on their shelves. In glancing over such old Catalogues, the wish for “more Classics and fewer Schoolmen,” will often rise to the lips. But great as will remain the undeniable merits of Monks in respect of the preservation of ancient learning,—after deduction of all drawbacks,—it must always be born in mind, that scholarship was never their primary business. In all ages of the Monastic Institute, Prayer, Penitence, Worship, Consolation, came before Study and Teaching. To a great extent the learning of the cloister grew out of its missionary enterprise.

The monk who was sent forth to convert Pagans to Christianity found that Civilization must go hand-in-hand with Religion. The cultivation and exercise of his own mind, that it might afterwards arouse the slumbering powers of other minds, lay then in the direct path of his daily duty. But it could scarcely be expected that the Christian priest who had to fight with rude Paganism in its open crimes and its visible idol-worship, should have much sympathy with refined Paganism in its deification of the passions, however beautifully arrayed in poetical imagery.

[§ 1. Classification of Monkish Libraries in the Middle Ages.]

The contents, then, of the Monkish libraries were at the outset almost exclusively theological; and, at all periods, Theology was a preponderating element in them. At least in theory, all other subjects of human knowledge were viewed, more or less completely, in subordination to this.

Another preliminary consideration will claim a word or two. Even when the books of a monastic community had become numerous and of varied character, no one monk had much time to make their classification a matter of elaborate study. The *Armarius* or Librarian was usually a pluralist, and none of his offices were sinecures. He was often Precentor. But not only had he to lead the Choir, he had to furnish it with breviaries and service books. The task of superintending the labours of the *Scriptorium* devolved upon him. Sometimes in addition to his musical and literary duties, the poor *Armarius* seems to have been a sort of Master of Ceremonies, and general overseer of the daily conventual life.* So that there must have been ample warrant for that appointment of an '*Armarius Junior*,' or '*Solatium Armarii*,' which we occasionally meet with in monastic chronicles.

[§ 2. Classification adopted in the Catalogue of the Library of St. Riquier, A.D., 831.]

In his *Spicilegium*, Father d'Achery has preserved for us a monastic catalogue of the Ninth Century. It forms part of a general return of all the property of the Abbey of St. Riquier, which was made, in the year 831, by order of Lewis *le Debonnaire*. Its arrangement is as follows:—

- I. Bibles and Biblical Commentaries.
- II. Fathers of the Church.
- III. Grammarians (*De Libris Grammaticorum.*)

* *Antiquiores Consuetudines Cluniacensis Monasterii*, printed in D'Achery's *Spicilegium*, iv, 115-188. Comp. Du Cange, sub voce *Armarius*, (*Glossarium mediæ et infimæ Latinitatis*, Henschel's Edit. i, 397); and Martene, *De Antiquis Ecclesiæ ritibus*, iii, 260, seqq.

IV. Historians (*De libris Antiquorum, qui gestis Regum, vel situ Terrarum scripserunt.*)

V. Missals and other Service books.*

In the Royal Library of Munich, the vast extent of which is, in a great degree, owing to the aggregation of ancient libraries from other parts of Bavaria, many of them monastic in their origin, there is a very curious series of the old book-lists of conventual collections, which is said to number nearly 600 separate catalogues, including, as may be well imagined, specimens of almost all known varieties.†

Amongst these is a Catalogue of the Library of the Benedictine Abbey of Weihenstephan, compiled in the 12th Century, which begins thus:—*Hæc est noticia librorum catholicorum Ecclesiæ S. Stephani, imprimis qui pertinent ad divinum servitium.* Then follow, *Alii libri a fratribus in capitolio et ad mensam et ad colia. legendi*, all of which are theological or devotional. These are followed by scientific, poetical, and historical books, indiscriminately. Here the only classification is that resulting from the different *uses* to which the books were applied under the monastic regulations.

[§ 3. Catalogue of the Library of St. Emmeram at Ratisbon.]

In the Catalogue of the Library of the Monastery of St. Emmeram, at Ratisbon, the primary arrangement is that of the desks or bookcases in which the volumes were placed. Of these there were thirty-two, thus appropriated:—

I. II.	<i>Librum textuum Bibliæ.</i>
III. IV. V. VI.	<i>Diversi Expositores super Biblia.</i>
VII. VIII. IX. X. XI. XII. XIII. XIV. XV.	<i>Doctores (antiquiores) secundum ordinem alphabeti, cum quibusdam Libris suis.</i>
XVI.	<i>Libri Historiarum.</i>
XVII. XVIII. XIX. XX.	<i>Libri diversorum doctorum (recentiorum.)</i>
XXI. XXII. XXIII.	<i>Libri Juris (Canonici.)</i>
XXIV.	<i>Libri diversorum.</i>
XXV.	<i>Libri Juris (Civilis and Canonici.)</i>
XXVI. XXVII. XXVIII. XXIX.	<i>Libri artium.</i>
XXX.	<i>Libri de diversa materia.</i>
XXXI.	<i>Libri Omeliarum et Passionalia.</i>
XXXII.	<i>Biblia in partibus. ‡</i>

* *Chronici Centulensis, sive S. Richarii*, lib. iii, c. 3, printed in Dacherii *Spicilegium*, iv, 482-486.

† Schmeller. *Ueber Büchercataloge des XV und frühere Jahrhunderte*, (*Serapeum*, ii, 243, seqq.)

‡ Schmeller, *ut supra*, 262.

Another catalogue of the same collection, apparently written about 1460, preserves the same general arrangement, with certain improvements in details. Forty years later comes a new arrangement, introduced by Brother Dionysius Menger, whose catalogue is based, not on the subject matter but on the form and material of the books. He assorts the library into (1) Vellum MSS.; (2) Paper MSS.; (3) Printed Books. These classes are subdivided into the letters of the alphabet, and these again by figures, extending usually to twenty under each letter. Thus of the 420 vellum MSS., the first (*Papias sive mater verborum*, in magno volumine et antiqua bona scriptura,) is marked A. 1; and the last (*Tabula notabilis et magistralis*, in pergameno et affixa bitumine baculo et circumligatur fune canopeo, et dicitur *Tabula Itaf*, sive quatuor regiones quatuor elementorum, habens in fronte imaginem monachi et medici depictam, &c.,) is marked X. 16, and so on with the rest.

[§ 4. Classed Lists of Early Printers.]

Of the Catalogues which contain only Printed Books, the earliest are in some degree Classed Catalogues, and the character of the classification seems to have been determined by that of the stock-in-trade of those Fathers of Printing who issued them. Thus, in 1498, the elder Aldus published a Catalogue of “Libri Græci impressi,” under the classes—

- | | |
|----------------|---------------------|
| 1. Grammatica. | 4. Philosophia. |
| 2. Poetica. | 5. Sacra Scriptura. |
| 3. Logica. | |

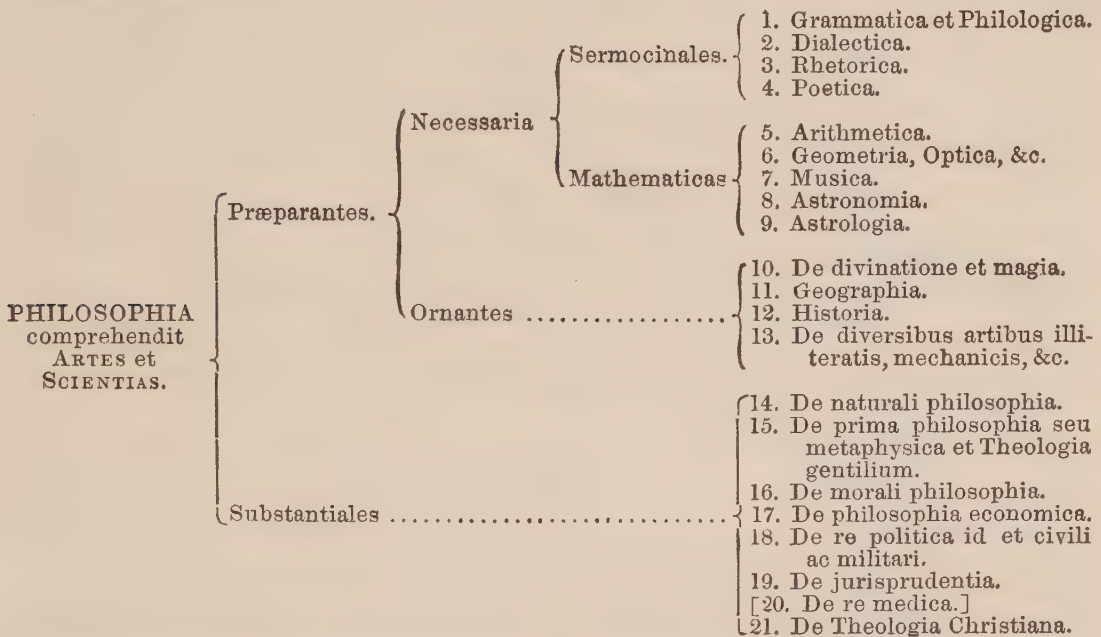
About half a century later (1546) we have catalogues of Robert Estienne, in which the following divisions appear:—

- | | |
|----------------|-------------------|
| 1. Hebræa. | 8. Rhetorica. |
| 2. Græca. | 9. Oratoria. |
| 3. Sacra. | 10. Dialectica. |
| 4. Prophana. | 11. Philosophica. |
| 5. Grammatica. | 12. Arithmetica. |
| 6. Poetica. | 13. Geometrica. |
| 7. Historica. | 14. Medica. |

[§ 5. Gesner's scheme of Classification.]

In 1548 we arrive at what some writers have termed “the first bibliographical system,” published with a view to the *use* rather than to the sale of books; it is that of Conrad Gesner, and appeared in the shape of an index of matters to his “*Bibliothèque Universelle*,” under the title of “*Pandectarum*,

sive partitionum universalium libri xxi." Cuvier has given a minute account of the work in the excellent notice of Gesner which he inserted in the *Biographie Universelle*, adding that the author (like many other authors) never considered it "as complete as it ought to be," and therefore never permitted the section "Medicine" to be printed. Brunet, too, praises Gesner as a man of good sense, who knew how to keep clear of "those arbitrary combinations of several sciences into a single class, which have captivated so many learned men."* M. Brunet appears, however, to have overlooked that synthetical grouping of the various divisions and subdivisions which Gesner placed at the head of his section entitled "*Partitiones theologicae.*" If only as the *first* scheme of its kind, this synopsis deserves to be quoted at length. It is as follows:—



The system of classification next in order of date is that which was proposed by Florian Treffer, a Bavarian Benedictine, in a work published in 1560, which I know only by M. Albert's citation of it in his "*Recherches sur la classification bibliographique*;" and by Dr. Edmund Zoller's brief epitome, in his tract, entitled "*Die Bibliothekwissenschaft.*" Its arrangement of classes runs thus:—I. Civil Law; II. Canon Law; III. Casuistry; IV. and V. Dictionaries, &c.; VI. and VII. Hagiography, Chronography, and Topography; VIII., IX, and X. Theology; XI. Philosophy; XII.

* *Manuel du libraire*, Introduction, viii (4th edition.) Gesner has dedicated each of his twenty books or chapters to a celebrated printer, and usually appends to the dedication a list of the most important books printed by each of them respectively.

Oratory and Rhetoric; XIII. Epistolography; XIV. Poetry; XV. Philology; XVI. Miscellanies (*promiscue omnes quotquot superioribus non possint inseri*); XVII. German books (*libros Teutonicos*). Treffer's treatise was already numbered amongst books of great rarity almost two hundred years ago. Both Zoller and Albert, (in common with Jöcher and Ziegelbauer) appear never to have seen the book itself, but describe it on the authority of an elaborate notice by Struve in the Jena periodical *Bibliotheca antiqua*, for January, 1706.

[§ 6. C. de Savigny's scheme.]

In 1587 Christofle de Savigny published, under the title of "*Tableau accompli de tous les arts libéraux contenant une générale et sommaire par-tition des dits arts, amassez et reduicts par ordre, &c.*," a scheme which is substantially but a modification of Gesner's. The number of classes is sixteen, which are thus arranged:—1. Grammar; 2. Rhetoric; 3. Dialectics; 4. Arithmetic; 5. Geometry; 6. Optics; 7. Music; 8. Cosmography; 9. Astrology; 10. Geography; 11. Physics; 12. Medicine; 13. Ethics; 14. Jurisprudence; 15. History; 16. Theology. Each class has its divisions and subdivisions worked out with much elaboration; and, in a second edition of the work, published in 1619, two additional classes are introduced, namely, 17. Poetry; and 18. Chronology.

If literary history did not present us with so many instances of the eagerness with which petty attacks are made upon great names, in the hope of nibbling off, as it were, some fragment of that fame which cannot be openly contested, we might feel surprise that any writer should have ad-duced this scheme of Savigny's as being "certainly an anticipation and probably a *source*" of the famous "Encyclopædical tree" of our illustrious Bacon, to which in truth it bears scarcely any resemblance. Strange as it may seem, however, this has actually been done, and that by the eminent bibliographer Brunet, in the introduction (already quoted) to the "*Manuel du libraire*."* It would have been much more to the purpose to have pointed out the very obvious similarity which exists between the classifica-tion of Savigny and that of Gesner, which had preceded it by forty years.

* Brunet's words are: "C'est un système figuré de toutes nos connaissances, antérieur de près de vingt ans, remarquons-le bien, à l'Arbre Encyclopédique de Bacon, dont il a pu être le modèle," M. Albert quietly overlooks Bacon altogether.

[§ 7. Bacon's scheme.]

That well-known survey of all human knowledge by which Bacon at the same time recorded the discoveries that had been already effected, and traced the courses which yet remained to be explored by the enterprise of many succeeding ages, was first given to the world in 1605. Human learning he regards as issuing from the three fountains of *Memory*, of *Imagination*, and of *Reason*; HISTORY being the emanation of the first; POESY of the second; PHILOSOPHY of the third; and there can be, he adds, “no other, nor no more; for History and Experience we take for one and the same, as we do Philosophy and Science.”

To quote the whole of the “*Partitio universalis doctrinæ humanæ*,” can scarcely be needed for the purpose in view. But a brief recital of its main divisions may be useful. They run thus:—

CLASS I.—HISTORY:	$\left\{ \begin{array}{l} 1. \text{ Natural History.} \\ 2. \text{ Civil History:} \end{array} \right.$	$\left\{ \begin{array}{l} a. \text{ Ecclesiastical.} \\ b. \text{ Literary.} \\ c. \text{ Civil, proper.} \\ d. \text{ Civil History,} \\ \text{Appendices to } \left\{ \begin{array}{l} i. \text{ Orations.} \\ ii. \text{ Letters.} \\ iii. \text{ Apothegms.} \end{array} \right. \end{array} \right.$
CLASS II.—PHILOSOPHY:	$\left\{ \begin{array}{l} 1. \text{ Science of God.} \\ 2. \text{ Science of Nature:} \\ 3. \text{ Science of Man.} \end{array} \right.$	$\left\{ \begin{array}{l} a. \text{ Primary Philosophy.} \\ b. \text{ Physics.} \\ c. \text{ Metaphysics.} \\ d. \text{ Magic.} \\ e. \text{ Natural Philosophy.} \end{array} \right.$
CLASS III.—POETRY:	$\left\{ \begin{array}{l} 1. \text{ Narrative Poetry.} \\ 2. \text{ Dramatic Poetry.} \\ 3. \text{ Allegorical Poetry.*} \end{array} \right.$	

Here we have an intellectual chart which, as Dugald Stewart has said, (in the preface to the preliminary dissertations to the *Encyclopædia Britannica*,) “is, with all its imperfections, the only one of which modern philosophy has yet to boast.” This remark is still substantially true. Bacon’s scheme is admirable for comprehensiveness, for lucid arrangement, and for a terminology, at once striking and precise, which the memory can easily and firmly grasp. But it is far better adapted to the purposes of the Historian of Learning and of the Sciences than to those of the Librarian. It is fitter for the classification of ideas than for that of books. In his third class the illustrious author seizes the substance, and disregards

* F. Baconi *Partitio universalis doctrinæ humanæ, &c.* (*De Dign. et Aug. Scientiarum*, lib. 2.) Works, by Montagu, viii, 87, *ad finem*, 8vo. 1828.

the form:—"By Poesie, in this place," he says, "we understand nothing else but original history or fables," ("fiction" as we now say, whether in prose or verse.) *As for verse, that is only a style of expression;*" whilst in his first class he makes *Natural History* and *Civil History* to be correlatives, and thus lays down a rule which, (if it could be carried out) would sever the narratives of what has been observed concerning the workings of nature, from those treatises on what we call the laws of nature, which are but deductions from that observation.

[§ 8. D'Alembert's Elaboration of Bacon's Scheme.]

Accordingly in D'Alembert's Elaboration of Bacon's scheme we find the "Natural History of Minerals," to be a section of the fourth division of class I, and "*Mineralogy*" we find to be a section of the sixth division (*Physics*) of class II, and so it is with plants and with animals. But how, in practice, are we to demarcate Mineralogy from the history of minerals, or Botany from the history of plants?

This system of D'Alembert is so entirely an amplification of Lord Bacon's that it will be more fitly noticed here than in the order of its date (1767). The three main classes he retains, but increases the number of divisions and sub-divisions, and alters their arrangement. Briefly it may be thus stated:—

Class I.—HISTORY.

1. Sacred History.
2. Ecclesiastical History.
3. Civil History.
4. Natural History, [*including its application in Arts, Trade, and Manufactures*]

Class II.—PHILOSOPHY.

1. General Metaphysics or Ontology.
2. Science of God—(i.) Natural Religion; (ii.) Revealed Religion; (iii.) Science of Good and Evil Spirits.
3. Science of Man—(i.) Universal

Pneumatology; (ii.) Arts of Thinking—Retaining—Communicating:—*a.* Logic, *b.* Writing, *c.* Printing, &c.—(iii.) Morals:—*a.* Ethics, *b.* Jurisprudence, *c.* Commerce.

4. Science of Nature:—(i.) Mathematics; (ii.) Physics.

Class III.—POETRY.

1. Narrative Poetry.
2. Dramatic Poetry.
3. Allegorical Poetry.
4. Music—Painting—Sculpture—Architecture.*

[§ 9. Other modifications of Bacon's Scheme.]

The system of Bacon has also been made the ground-work of other

* D'Alembert, *Discours préliminaire à l'Encyclopédie Méthodique* (*Mélanges*, i, 239, et seqq. 8vo, Amst., 1767.)

schemes by Regnault Warin,* by Laire,† and by Peignot ‡ These, however, I pass by with the remark that many of the alterations they propose will not on close examination establish themselves as improvements, and that in some instances the later writer expunges the additions or substitutes of his immediate predecessor, and reverts, more or less exactly, to the former arrangement. Thus, for instance, Laire added to the three main classes of Bacon, of D'Alembert and of Regnault, these two:—(4) PHYSICAL WANTS, (5) MORAL WANTS. Peignot omits these; adheres to most of the modifications introduced by D'Alembert; suppresses from the section "Physics," all that bears on Natural History, other than that of the human frame (veterinary medicine excepted), and prefixes an introductory section "Bibliography," by way of preface to the three grand divisions of human knowledge, the third of which he designates "IMAGINATION" instead of "POETRY," and in this third class includes not only "FINE ARTS," but MECHANICAL ARTS; so that a treatise on the art of Cotton Spinning finds itself to be allied with *Hamlet* and with the *Iliad*. Himself a librarian and a bibliographer, it need scarcely be added that in the arrangement of most of his details he has far more regard than D'Alembert had to the requirements of a library; but the system fails, and must fail, to adapt itself to the classification of books, be the amount of ingenuity expended upon the effort what it may.

[§ 10. Schemes of John Rhodius and of Claudius Clement.]

In 1631, John Rhodius proposed a scheme for the arrangement of the University library at Padua, the original manuscript of which has found its way to the Town library of Hamburgh, and has been recently communicated to the Leipsic Journal *Serapeum*, by Dr. F. L. Hoffmann, under the title of *Ein bibliothekarisches Gutachten abgegeben im Jahre 1631*. Rhodius was a Dane; had studied at Wittemberg, and in other German Universities; and finally established himself at Padua, where he died in 1659. His system comprises twelve principal classes, thus arranged:—

* *Tableau de l'entendement humain—Introduction aux études encyclopédiques* (8vo, Paris, 1798.)

† Peignot, *Dictionnaire raisonné de Bibliologie* (8vo, Paris, 1802), ii, 235, (referring to MSS. preserved at Besançon.)

‡ Ibid. ii, 271—280.

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| I. Theology. | VII. Oratory. |
| II. Jurisprudence. | VIII. Rhetoric. |
| III. Medicine. | IX. Logic. |
| IV. Philosophy. | X. Philology. |
| V. History. | XI. Criticism. |
| VI. Poetry. | XII. Grammar.* |

In 1635 Claudius Clement published his work entitled, *Musei, sive Bibliothecæ tam privatæ quam publicæ extractio, instructio, cura, usus, libri iv.*, in which he proposes to class books in a method very similar to that so shortly before suggested at Padua. His arrangement stands thus:—

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| I. Theology. | VII. Sacred History. |
| II. Law. | VIII. Profane History. |
| III. Philosophy. | IX. Polygraphy. |
| IV. Mathematics. | X. Oratory and Rhetoric. |
| V. Physiology. | XI. Poetry. |
| VI. Medicine. | XII. Grammar, &c. |

But although the author could boast the dignified appellation ‘Regius Professor Eruditionis in Collegio Imperiali Madritensi’ his work does little honour either to his learning or his power of exposition, and goes far to justify the criticism of his namesake, David Clement, of Göttingen, who says of him that he had “acquired at Madrid the habit of making diffuse orations on subjects which he did not understand.” It is with small warrant, indeed, that some writers have spoken of this scheme as the model, to some extent, of that adopted by Gabriel Naudé in his ‘*Bibliothecæ Joannis Cordesii Catalogus*’ published in 1643.

[§ 11. Naudé’s scheme.]

Several years earlier, Naudé had published his *Avis pour dresser une bibliothèque*, which has a special interest for Englishmen, inasmuch as it received the honour of translation at the hand of John Evelyn. The author unfortunately is best known by that which is least honourable to his memory. He had the temerity to attempt a justification of the massacre of St. Bartholomew, on the miserable plea that it was like the act of the skilful surgeon who, having opened a vein, bleeds his patient even to fainting, in order to cleanse the system of its peccant humours.† But his merits as a truly liberal promoter of learning, and as one who in

* *Serapeum* 1856, (*Intelligenz-Blatt*), 17–21.

† *Considerations politiques sur les Coups d’Etat*, 4to, (published in the same year as the *Bibliotheca Cordesiana*, 1643.)

that capacity was greatly in advance of his generation, are so considerable that even a frenzy of partizanship carried to so sad a pitch may now, perhaps, claim to be pardoned as the error of a man who, having travelled almost over the length and the breadth of Europe, in search of valuable and splendid books, until he had gathered together not alone the largest, but the most superb library of that age, chiefly plumed himself, not upon the beauty, or the rarity, or the costliness of the collection, but on its free accessibility to all men. In his own vigorous words:—"It shall be open to all the world, without excluding a living soul," (not even the poor Huguenot,) "from eight o'clock in the morning until five in the evening :From its door shall resound that cry which has never yet been heard in the Republic of Letters: 'Come in, all you who desire to read, come in freely.'"*

The principal classes proposed by Naudé are as follows:—

Theology.	Military Art.
Medicine.	Jurisprudence.
Bibliography.	Council and Canon Law.
Chronology.	Philosophy.
Geography.	Politics.
History.	Literature.

After mentioning some of the far-fetched schemes which super-subtle writers on this subject had previously proposed, he observes that he would hold such complicated and labyrinthine methods in as little esteem as an unintelligible author, and adds, "I think that system best which is easiest, least complex, and most accordant with established usage." It is obvious, therefore, that whilst Naudé did, to some noticeable extent, improve on preceding systems, both as to the precision of his classes, and as to the order of their sequence—an improvement which will be very manifest if, for instance, we compare his arrangement with Clement's—he expressly disclaimed all desire to achieve reputation as a daring innovator. And in this respect, as we shall see in the sequel, his example has been followed by those of his countrymen who have rendered the most truly efficient services to literature in this not very attractive field of labour.

[§ 12. Bouillaud's scheme.]

I come now to what is substantially the ordinary system of modern French bibliographers. The honour of originating it has been claimed,

* *Dialogue entre Mascarat et Saintange*, as quoted by M. le Comte de Laborde in the fourth of his letters *De l'Organisation des bibliothèques dans Paris*, p. 20.

sometimes for the learned Jesuit Jean Garnier, and sometimes for Gabriel Martin, for so long a period the most eminent of the Paris booksellers; but the claim which is best authenticated seems to be that of Ismael Bouillaud, the compiler of the sale-catalogue of the famous library of De Thou.

Owing to the singular circumstance which retarded, without preventing, the dispersion of that noble collection, Bouillaud's catalogue had lain long in MS. before it was sent to press. It was not published until 1679, and then appeared under the editorship of Joseph Quesnel. The learned author makes no display of his erudition or of his ingenuity, by adding new classes, or by coining new and sonorous names for the old ones; but he lays hold of five classes, some of which will be found in all the preceding schemes, and all of them, with others, in that of Naudé, namely:—

- I.—Theology;
- II.—Jurisprudence;
- III.—History;
- IV.—Philosophy;
- V.—Literature;

and brings all the books with which he had to deal under one or other of these grand divisions. The more important of the details of this classification will be shewn most advantageously, and with most economy of time, when I come to speak of the modifications introduced into it by Martin, and by De Bure.

[§ 13. Garnier's scheme.]

In the year preceding the publication of the *Bibliotheca Thuana*, Garnier gave to the learned world his able and elaborate *Systema Bibliothecæ Collegii Parisiensis Societatis Jesu*. I give the classes and the main divisions only, in the *first* form in which they appeared.

Class I.—THEOLOGY:—

1. Holy Scriptures.
2. Biblical Criticism (*Glossatores Critici Tractores Catenæ, &c.*)
3. Interpreters both of the Old and New Testaments.
4. Interpreters of the Old and New Testaments severally.
5. Collections of the Fathers, both Greek and Latin (*Bibliothecæ Patrum.*)
6. Greek Fathers.

7. Latin Fathers.

8. Scholastic Theologians.

9. Polemical or Controversial Theologians.

10. Casuists.

11. Ascetics.

12. Preachers.

Class II.—PHILOSOPHY:—

1. Philosophers.

2. Mathematicians.

3. Physicians.

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| 4. Grammarians. | } <i>Literæ
humaniores.</i> |
| 5. Orators. | |
| 6. Poets. | |
| 7. Philologists. | |

Class III.—HISTORY:—

1. Geographers.
2. Chronologists.
3. Universal History, both ecclesiastical and political.
4. General History of the Church.
5. History of particular Churches.
6. History of Religious Orders.
7. History of Saints.
8. Greek History.
9. Roman History.
10. Italian History.
11. French History.
12. Spanish History.
13. German History.
14. Belgic History.
15. English History.

16. Northern History (Danish, Swedish, &c.)
17. History of the Countries adjacent (the Turks, Hungary, Poland, Muscovy, &c.)
18. History of the New World; Voyages and Travels.
19. Genealogical History.
20. Literary History.
21. Iconological History (Archæology, Numismatics, &c.)
22. Natural History.
23. Artificial History.
24. Fabulous History.

Class IV.—JURISPRUDENCE:—

1. Councils and Pontifical Letters.
2. Canon and Ritual Law.
3. Roman Civil Law.
4. French Law.
5. Foreign Law (of various countries in their order).
6. Law of Nations.

Father Garnier's scheme embraces, in the whole, 461 sub-divisions, of which 74 belong to Theology; 88 to Philosophy; 227 to History; and 72 to Jurisprudence; and it may fairly be said that in its minutest ramifications it bears the marks of honest and intelligent labour. The arrangement of the classes "History" (at least as to its first twenty sections) and "Jurisprudence" displays, I think, a great improvement on all preceding systems. In common with the latter, that of the class "Philosophy" is clumsy and confused. Grammar, Rhetoric, Poetry, Poetics, and Philology, are all embraced in this class, whilst works of fiction, both in prose and verse, form a section of the class History, under the designation *Historia fabulosa*. The vast field of "Politics," using that term in its widest sense, is inclosed in another section of the same class, and is named *Historia artificialis*; and the author defines it as including (1) what relates to man individually—his food, clothing, housing, death, and burial; (2) what relates to man as existing in families—marriage, servitude, &c.; (3) what relates to societies of men; and so on.* The formidable division "Heter-

* Adding, after considerable amplification on these heads, "ad hoc caput, referuntur, quæ traduntur de præmiis et pœnis, de militia, de mercimoniis, de artificiis, de agricultura," &c.—*Systema*, &c., p. 86.)

odoxia," (*Hæreticorum et impiorum libri in octo ordines*,) brings up the rear, but may be regarded rather as an appendix to the preceding classes than as itself forming a fifth class.

[§ 14. Leibnitz' scheme.]

About the year 1700 Leibnitz drew up his *Idea bibliothecæ publicæ secundum classes scientiarum ordinandæ*,* in which he proposes ten main divisions, viz.:—I. Theology; II. Jurisprudence; III. Medicine; IV. Intellectual Philosophy; V. Mathematics (*Philosophia rerum imaginationis*); VI. Physics (*Philosophia rerum sensibilibium*); VII. Philology (*Res linguarum*, but including Poetry); VIII. Civil History; IX. Literary History and Bibliography; X. Collective Works and Miscellanies. In this classification it will be seen the term "Philology" is used in a sense almost co-extensive with that in which bibliographers now commonly employ the word "Literature"; whilst "Medicine" makes almost its last appearance in the character of an independent division of human knowledge.

[§ 15. Marchand's scheme, as developed in the Faultrier Catalogue.]

Nearly at the same period Prosper Marchand was busied in elaborating a new system which, as he hoped, was to be philosophical in its basis, expansive in its scope, and practical in its adaptability to the arrangement of books. But he did not publish this scheme until 1709, when it was developed in his *Catalogus librorum bibliothecæ Joachimi Faultrier*. In this catalogue we have the following classification:—

Class I.—PHILOSOPHY or HUMAN SCIENCES:—

1. Grammar.
2. Logic and Rhetoric.
3. Poetry.
4. Philology.
5. Ethics.
6. Jurisprudence.
7. Politics.
8. Metaphysics.
9. Physics.
10. Natural History.
11. Medicine.
12. Chemistry.

13. Arithmetic.

14. Algebra.

15. Geometry.

16. Astronomy.

17. Astrology.

18. Optics.

19. Music.

20. Statics.

21. Arts.

Class II.—THEOLOGY, or DIVINE SCIENCE.

Class III.—HISTORY, or the SCIENCE OF EVENTS.

Appendix.—POLYGRAPHY.

* Published by Feller in *Otium Hanoveranum*, 128-138. (Leipz. 1718, 8vo.) *Comp. Guhrauer, Bibliothecarisches aus Leibnizens Leben und Schriften*, (*Serapeum*, xii, 27-30.)

This plan, however, met with small favour. Its author had previously introduced some slight modifications into that of Bouillaud, and these seem to have kept their place.

In 1709 also appeared the *Dispositio Catalogi Bibliothecæ J. Renati Imperialis* (at Rome), by Giusto Fontanini, (afterwards Archbishop of Ancyra, and author of the *Bibliotheca della Eloquenza Italiana*,) under the five classes—I. Theology; II. Jurisprudence; III. Philosophy (1. *P. rationalis*; 2. *P. naturalis*; 3. *Historia naturalis*; 4. *P. moralis*; 5. *P. politica*; 6. *Medecina*; 7. *Mathesis*; 8. *Astronomia*;) IV. History; V. Poly-mathy (1. *Philologia*; 2. *Rhetorica*; 3. *Poetica*; 4. *Grammatica*.) This classification is worked out in great detail, the number of divisions or chapters being sixty-two, and that of sections no less than 1828. In the arrangement of the latter the alphabetical order appears to have been adopted wherever it was practicable.*

[§ 16. Girard's scheme.]

Amongst the papers of the Abbé Girard—author of the once celebrated *Synonymes*, and of the *Principes de la Langue Française*—was found the MS. of a new bibliographical system, widely different from all which I have hitherto noticed. Its merits, be they what they may, are buried beneath a barbarous nomenclature which must have gone far to deprive them of all chance of recognition. Human knowledge is by him arranged in six classes, each with precisely six divisions, and each division is subdivided into two sections, neither more nor less.

“ Class nods at class, each section has a brother,
And half the system just reflects the other.”

A very brief specimen must suffice.† The six classes are: I. THEOLOGY; II. NOMOLOGY (Social Science); III. HISTORIOGRAPHY; IV. PHILOSOPHY; V. PHILOLOGY; VI. TECHNOLOGY. The details of class II. are as follows:

1. Discipline.
 - (i.) *Christian*; (ii.) *Nétéronome*.
2. Civil Law.
 - (i.) *Politics*; (ii.) *Jurisprudence*.
3. Corporology.
 - (i.) *Cenobitical*; (ii.) *Associative*.

* Romæ, ex off. F. Gonzage: reprinted in Koehler's *Sylloge*, &c., 1728.

† The scheme is given at length in the *Encyclopedia* of Diderot and D'Alembert, ii. 761-765, (1st edition.)

4. Ethicology.
(i.) *Treatises on Morals*; (ii.) *Characters*.
5. Thesmology.
(i.) *Usages*; (ii.) *Modes*.
6. Praxetonomy.
(i.) *Ætiology (Domestic Economy)*; (ii.) *Ludicrology (Games of Chance, &c.)*

Whimsically absurd as this scheme may appear, it has not been without imitators.

[§ 17. Conyers Middleton's scheme.]

In 1723 Dr. Conyers Middleton submitted to the Senate of the University of Cambridge a scheme for the classification of the University Library, which by various munificent gifts had recently been much enlarged. The following were the principal divisions :

Class I.—THEOLOGY :—

1. Holy Bible.
2. Hermeneutics.
3. Greek and Latin Fathers.
4. Scholastic Theology.
5. Moral Theology.
6. Mystical Theology.
7. Hortatory Theology.
8. Polemic Theology.
9. Councils; Canon and Pontifical Law.
10. Sacred and Ecclesiastical History.

Class II.—PROFANE HISTORY :—

1. Works on the Composition and Study of History.
2. Chronology and Universal History.
3. Ancient History.
4. Byzantine History.
5. History of the Western Empire.
6. History of the Saracens and Turks.
7. History of Particular Countries.
8. Historical Miscellanies.

9. Literary History.

Class III.—CIVIL LAW.

Class IV.—PHILOSOPHY :—

1. Works of Ancient Philosophers.
2. Works of Modern Philosophers.
3. Treatises on Logic, Ethics, Economics, and Politics.
4. Physics, Metaphysics, Natural Theology, Philosophical Lexicons.

Class V.—MATHEMATICS.

Class VI.—NATURAL HISTORY.

Class VII.—MEDICINE.

Class VIII.—POLITE LITERATURE :—

1. Works of Orators.
2. Works of Poets.
3. Works of Letter-writers.
4. Works of Antiquaries.
5. Works of Philologists.
6. Works of Polygraphers.
7. Works of Grammarians.
8. Miscellanies (*Miscellanea quæ ad certam aliquam classem reduci nequeant*).*

This publication had the result—singular for a prelection on so harmless

* *Bibliothecæ Cantabrigiæ ordinandæ methodus.* (Miscell. Works, iv. 74-82, 8vo. London, 1755.)

a topic—of subjecting its author to a prosecution for libel,* but of other result it seems to have been barren. The present University librarian, Mr. Power, stated in his reply to the inquiries of the recent Commission of Inquiry into the state of Cambridge University, that “the books are not arranged *generally* in classes,” and that “there is no classed catalogue of this Library;” and he adds, somewhat too sweepingly, “the formation of such a catalogue would be very laborious and expensive, and *its use is very much superseded by such books as Brunet’s Manuel du Libraire,† Watt’s Bibliotheca Britannica, &c.*” Even if these books could themselves be fairly placed in the category of “classed catalogues,” it is not very easy to perceive in what way they could be used as substitutes for the proper catalogues of an individual library.

[§ 18. Modifications of the Scheme of Bouillaud by Martin and De Bure, resulting in the “Scheme of the Paris booksellers.”]

As I have said already, the minor modifications which Marchand introduced into the bibliographical system of Bouillaud were received with more favour than were those cruder innovations which he embodied in the Faultrier catalogue. Gabriel Martin adopted the former in most of the catalogues which he published between the years 1711 and 1760—a series then certainly unprecedented in the annals of bookselling—and De Bure followed in the same track. The result of their successive labours has since been designated “the system of the Paris booksellers,” and its main divisions run thus :

Class I.—THEOLOGY :—

1. Holy Scriptures and their Interpretations.
2. Councils and National Synods.
3. Liturgies.
4. Works of the Fathers.
5. Works of the Schoolmen and of Modern Theologians.

Class II.—JURISPRUDENCE :—

1. Canon Law.

2. Civil Law.

Class III.—SCIENCES AND ARTS :—

1. Philosophy.
2. Physics.
3. Natural History.
4. Medicine.
5. Mathematics.
6. Arts.

Class IV.—LITERATURE :—

1. Grammar.
2. Rhetoric.

* At the time of its appearance, it may be remembered, the vexed question respecting the right of appeal from decisions of the Vice-Chancellor or Senate to the Courts of Law at Westminster was hotly disputed, and a sentence in Middleton’s dedication was construed into a contempt of the jurisdiction in question.

+ *Report of Cambridge Univ. Commissioners, 1852.* (Evid. p. 57.)

3. Poetry.
4. Philology.
5. Polygraphy.

Class V.—HISTORY :—

1. Historical Prolegomena.
2. Geography.
3. Chronology.
4. Ecclesiastical History.
5. Ancient History.

6. Modern History: (i.) Europe, (ii.) Asia, (iii.) Africa, (iv.) America.
7. Historical Paralipomena (*Heraldry and Genealogy*.)
8. Antiquities.
9. Literary History and Bibliography.
10. Biography.
11. Historical Extracts.

This is the system of which Charles Nodier has said, “It is simple, clear, easy. It can include, without strain, all the capricious and innumerable sub-divisions which it has pleased human fancy to introduce into the literary form of books;” and (which appears to me of still more importance) it is embodied in catalogues which have become classics in their kind.

[§ 19. Essential characteristics of the Schemes hitherto enumerated.]

If the members of this Society who have thus far honoured me with their attention in what I fear will prove to be a tedious survey, will now kindly take the pains to cast a retrospective glance at the various schemes which have been particularized, they will perceive, I think, that however diversified in their respective details, all of them may be grouped in one or other of two classes; the first of which aims at the systematic and consecutive arrangement of all human knowledge, in accordance with some theory either of the power and functions of the mind itself, or of the order and sequence in which the phenomena of the material world may be conceived to present themselves to its contemplation; and the second of which, with far humbler pretensions, seeks but to assort after some convenient and manageable fashion the instruments of knowledge for ordinary employment and daily use. The system-maker in the former case aspires to solve some of the problems which have occupied and divided metaphysicians in all ages; in the latter he is content if he be found to have facilitated the buying and selling, the shelving and the finding of books, by all who handle them or seek them, whether their quest be for the Dialogues of Plato, or for the last edition of the favorite Cookery Book.

I am far from contending that it is necessary to apply to catalogues precisely the same rules as to that avoidance of subtle distinctions, and complex sub-divisions, which will be found indispensable in the actual

arrangement of books on their shelves. Whatever plan may be adopted, it is certain that a good catalogue will require a much more minute classification than would be either useful or practicable in the presses of a library. It is also certain that the preferability of one plan over another will greatly depend on the character and contents of the collection which has to be catalogued. If, for example, the library be especially rich in historical works, it may be expedient not only to give a series of divisions and sections under the class "HISTORY" far more numerous than those assigned to any other class, but also to insert in that class many works which in ordinary cases would have a better claim to appear elsewhere. Thus in a collection the main strength of which lies in *British* history, it may be well to catalogue the "*Statutes at Large*," (the merits of which as an historical text-book have been well enforced by Mr. Froude in the *Oxford Essays*,) in that class rather than in the class "Jurisprudence," giving in the latter a mere reference or guide-mark; and to take precisely the same course with many works which are poetical in *form* but historical in *substance*; as, for instance, the *Alliterative Poem on the deposition of King Richard II.*, or the collection of *Political Songs from the reign of John to that of Edward II.*, published by the Camden Society. This plan was adopted by John Michael Francke, in his catalogue of the library of Count Bunau (now incorporated with the Royal Library at Dresden), and it is not the least useful characteristic of that admirable though unfinished work.

During the latter half of the eighteenth century several new bibliographical systems were proposed—that of Leclerc de Montlinos, published in the *Journal Encyclopédique* for September, 1760, and critically dissected by Mercier, in the same Journal three months afterwards, being perhaps the most fantastically symmetrical of them all. But I pass them over without further mention, and hasten to the description of some, more important for our present purpose, which form a portion of the fruits of that intellectual activity to which the revolution of 1789 gave so vigorous an impulse. Of these the most noticeable seem to be the schemes proposed respectively by Ameilhon, by Camus, by Butenschoen, and by Daunou.

[§ 20. Ameilhon's and Camus' schemes.]

The prominent place assigned in preceding systems to Theology was of course offensive to men imbued with the revolutionary principles of the day. M. Ameilhon, therefore, proposed to displace Theology in favour of

Grammar, to retrench from Jurisprudence its section of Canon Law, (inserting the latter as a sort of appendix to Church History,) and to separate the Physical Sciences from the Arts. He makes nine chief classes, and arranges them thus:—I. Grammar; II. Logic; III. Morals; IV. Jurisprudence; V. Metaphysics; VI. Physics; VII. Arts; VIII. Literature; IX. History: and he is especially careful to disclaim all idea of grouping these classes according to any scheme of the faculties of the human mind, or of establishing by their sequence any theory of the growth of human knowledge.* M. Camus, on the other hand, is far more ambitious. Like so many of his predecessors nothing less will content him than to take a man “in a state of nature,” and then to class his library in the order in which this man of nature forms his impressions of the universe about him. His attention, says the worthy academician, is first directed to the heavens, and to the stars which embellish them, and then to the earth on which he dwells. And after having made the tour of the universe he comes back upon himself, studies his own mind, takes the measure of his own capacities, and *begins to collect all that has been written on the nature of man*, his education, the formation of languages, and so on. The reader will scarcely need further proof that the elaborate essay of M. Camus (although it has been printed more than once) has done small service to bibliography; but if further proof were desired, it will surely be afforded by the statement that the author gravely proposes to remove the eulogies of dead men from the shelf of Biography (where he admits common sense might be tempted to place them), and to transfer them to that of Oratory, because “eloquence is their chief object.”†

M. Butenschoen, who at the beginning of this century was Professor of History and Librarian, at Colmar, on the Upper Rhine, followed much in the same track, but with somewhat greater discretion. Peignot has described his system at great length. Here, however, I can but enumerate his principal classes, which run thus: I. Works introductory to the Sciences, Literature and the Arts; II. Literature and Fine Arts; III. Historical Sciences; IV. Philosophical Sciences; V. Mathematical and

* *Projet sur quelques changemens à faire aux catalogues des bibliothèques.* (*Mémoire, de l'Institut National, &c.*, ii, 477.)

† *Mémoires de l'Institut*, an IV. pp. 64, seqq. Peignot characterises this paper as “profound and judicious.” *Dictionnaire de bibliologie*, ii. 220. Achard has reprinted it in extenso, (*Cours de bibliographie*, i. 252-278.)

Physical Sciences; VI. Economical and Medical Sciences; VII. Arts and Trades; VIII. Positive Sciences (1. Jurisprudence, 2. Theology); IX. Miscellanies, Collections, and Polygraphy; X. Manuscripts, Literary Curiosities, Typographical Memorials.*

[§ 21. Daunou's scheme.]

Of all those innovating schemes which have a connection somewhat more than synchronical with the great French revolution, that which bears the distinguished name of Daunou is unquestionably the best. We have still, indeed, some attempt at symmetry, but it is, to a certain degree, restrained under the grasp of a vigorous and practical mind. Like Camus and Butenschoen he must begin at the beginning; but instead of putting, in imitation of the former, a fallen Adam into an unfenced Eden, he is content to put a well-conducted pupil into a well-endowed college. The student, he says, begins with grammar, goes through a course of literature, accompanied by some lectures on geography and history. A course of philosophy completes the routine of general instruction, and is followed by the special study of medicine, of law, or of theology, according to the profession for which he is intended. M. Daunou's classification, therefore, (after an introductory section devoted to Bibliography,) shapes itself thus: I. Literature (*Grammarians, Orators and Rhetoricians, Poets, Critics, Literary Miscellanies*); II. History (*Geography, Chronology, History proper, Works supplementary to History*); III. Sciences (*Philosophy, Metaphysics, Logic, Morals, Politics, Social Science, Political Economy, Physics, Mathematics, Natural History*); IV. Arts (*Agriculture, Mechanical Arts, Arts of Design, Music*); V. Medicine; VI. Jurisprudence; VII. Theology; VIII. Polygraphy or Encyclopædical Collections. In criticising this scheme, M. Brunet has very justly remarked, that however suitable it might be for mere *educational* collections, consisting in great part of elementary works, the attempt to treat all the other classes of a vast library, as though they formed a ladder by which to get into a pulpit or into a professional chair of law or medicine, would prove to be a failure.

[§ 22. Parent's scheme.]

Another scheme of this date—that of M. Parent—may, perhaps, deserve a word of remark in passing on. It proposes these thirteen chief divisions: 1. Agriculture and Commerce; 2. Languages and Grammar; 3. Mechani-

* Peignot, *Dictionnaire de Bibliologie* ut supra, ii. 213-218.

cal Arts; 4. Liberal Arts; 5. Mathematics; 6. Polite Literature; 7. Cosmography; 8. Natural History; 9. Chemistry, Physics, and Medicine; 10. History of Nations; 11. Legislation; 12. Morals; 13. Periodical Publications. Not the least curious thing connected with this essay is, that it includes a separate scheme for dividing literary history into fourteen great epochs, each of them connected with a predominating name. Its own epoch is sufficiently marked by the last three of these: "12th Epoch: Voltaire sketching on the walls of the Bastille the rough draft of the *Henriade*. 13th Epoch: Voltaire crowned at Paris. 14th Epoch: Bonaparte, the friend of the arts and of learning, consolidating the French Republic, and *giving peace to Europe*.*

[§ 23. Scheme of the Jena Repertorium.]

Turning from France to Germany, we find, in the Encyclopædical index, published in 1793, of the *Jena Repertorium*, a scheme for the classification of books, which is almost without parallel for the number and minuteness of its subdivisions. They amount to no less than 1200, and are grouped into sixteen principal classes, namely: I. Literature, generally; II. Philosophy; III. Theology; IV. Jurisprudence; V. Medicine; VI. Philosophy; VII. Pedagogy; VIII. Politics; IX. Military Art; X. Natural Sciences; XI. Mechanical Arts, Technology, and Commerce; XII. Mathematics; XIII. Geography and History; XIV. Fine Arts; XV. Literary History; XVI. Miscellaneous Works.† The class Philosophy embraces Ethics, Metaphysics, Logic, and their history. That of Fine Arts comprises—in addition to the Arts of Design, including Landscape Gardening—Music, Calligraphy, Oratory, Poetry, and Declamation. There can be little doubt that a system in which sub-division is carried to so great a length, would to most readers prove a labyrinth without a clue.

[§ 24. Schemes of Denis and of Olenin.]

Two years later, Denis, the learned librarian of the Imperial Library at Vienna, published a second edition of his work, once of some celebrity—*Einleitung in die Bücherkunde*, in which he proposes a system of classification based upon the words of Solomon:—*Wisdom hath builded her house: she*

* *Essai sur la bibliographie et sur les talents du bibliothécaire*, 1801.

† This index is, of course, like the Work to which it relates, in German. Achard has translated its headings or titles at length in his *Cours de bibliographie*, vol. ii., where they occupy fifty-six pages.

hath hewn out her seven pillars. These pillars are Theology, Jurisprudence, Philosophy, Medicine, Mathematics, History, and Philosophy; and he so arranges their several sections as to establish a fantastic sort of connection between his classes or “pillars.” In 1808, M. Alexis Olenin, one of the librarians at the Imperial Library at St. Petersburg, published an *Essai sur un nouvel ordre bibliographique*, in which he says that “having examined and compared the most accredited systems, he is led to begin his own by separating the Sciences from the Arts . . . And to add to these two classes thus severed, a third class under the name of Philology,” which latter class is to consist of three main sections:—1. Linguistics; 2. Polygraphy; 3. Criticism. The sub-divisions of all the classes in this scheme are carried out with great minuteness, and amount, in the whole, to upwards of 500.*

[§ 25. Girault's Scheme.]

Almost contemporaneous with the appearance of this system at St. Petersburg, was the publication of another bibliographical novelty at Paris, also the production of a librarian, M. Girault of Auxonne, but of one who, like so many of his predecessors, was far more intent on displaying his philosophical acumen in dealing with the vexed questions of metaphysics, than on simplifying the storing and the handling of his books. He sets out in the usual strain:—“I have reflected that, first of all, it is natural that we should seek to know the globe on which we dwell, the position we occupy on it, the events that have taken place there, the laws by which it is governed,” and so on; and then proposes these six fundamental divisions:—I. Preliminary Instruction; II. Cosmography; III. History; IV. Legislation; V. Natural History; VI. Sciences and Arts. Cosmography has two sections: Geography and Hydrography. Natural History has eight: Astronomy, Physics, Zoology, Botany, Fossils, Chemistry, Curative Art, Industry, which latter section includes Manufactures, Trade, and Commerce. If any further proof be needed how easily a plentiful crop of practical absurdities may be grown out of a super-subtle theory, it will be afforded by the statement that, although we have here a class of “*Sciences and Arts*,” we find the Art of *Printing* under “Preliminary Instruction;” the Art of *Swimming* under “Cosmography;” and the Arts of *Divination*, and of *Working in Metals*, under “Natural

* This scheme is printed in full in the Appendix to the *Report of the Select Committee on the British Museum*, of 1836, pp. 463–474.

History." This fine-spun system of M. Girault has long been buried with the worthy author, but I have not disinterred it without a purpose. It will be seen in the sequel, that not a little both of time and ingenuity is still misdirected with similar perversity.

[§ 26. Coleridge's Scheme.]

From the date of Middleton's scheme until the publication, by way of preface to the *Encyclopædia Metropolitana*, of Coleridge's "*Essay on Method*," no classificatory system of importance seems to have made its appearance in this country. Jeremy Bentham, indeed, in 1816, published a characteristic *Essay on nomenclature and classification* in the appendix to his *Chrestomathia*; but I doubt if he would have applied it to the arrangement of books, even had he undertaken to draw up a plan, not of a Code, but of a Catalogue, for the Emperor of China, or the King of Oude. *Idioscopic Ontology*, *Poioscopic Somatics*, *Nooscopic Pneumatology*, and *Polioscopic Ethirs*, would scarcely have been recommended even by Bentham, as to the running titles of a book-list, or the letterings of a book-case.

Of Coleridge's plan (if his it may be called, after his sharp protest against the revision the *Essay* underwent in hands editorial*), it may also be said that it was not directly or mainly intended for the classification of books. There is evidence, however, that he had its applicability to that use to some degree in view, and catalogues are extant to which it has been avowedly a model. Its fundamental construction may with reasonable brevity, be thus indicated:—

Class I.—PURE SCIENCES:—

1. Formal—(i.) Grammar; (ii.) Logic; (iii.) Rhetoric; (iv.) Mathematics; (v.) Metaphysics.
2. Real—(i.) Law; (ii.) Morals; (iii.) Theology.

Class II.—MIXED AND APPLIED SCIENCES:—

1. Mechanics.
2. Hydrostatics.
3. Pneumatics.
4. Optics.
5. Astronomy.

6. Experimental Philosophy.

7. Fine Arts.

8. Useful Arts

9. Natural History

10. Medicine.

Class III.—HISTORY:—

1. National History

2. Biography.

3. Geography, Voyages, and Travels.

4. Chronology.

Class IV.—LITERATURE AND PHILOLOGY.†

* "So bedeviled," he says, "that I am ashamed to own it."

† *Essay on Method* (Ency. Met.), Introd. i. 44, &c.

This scheme has, unquestionably, great merit. 1. Its nomenclature is plain and familiar. 2. Its main divisions are, for the most part, well defined. What is chiefly needed to adapt it to the practical classification of books would involve more of addition than of suppression.

[§ 27. Mr. Hartwell Horne's Modification of the scheme of Bouillaud and Martin, or the Paris Scheme.]

But, on the whole, I cannot but think it inferior, for library purposes, to the scheme embodied in Mr. Hartwell Horne's "*Outlines for the Classification of a Library*," which were submitted to the Trustees of the British Museum, almost at the same period. Mr. Horne's system is based on that of the "Paris booksellers," considerably modified, however, both with a view to the special requirements of the library for which it was proposed, and to the results of the proposer's personal experience—as well in the preparation of part of the Catalogue of the Harleian MSS,—as in the cataloguing of the fine library of Queen's College, Cambridge.

Four out of the five principal classes of the Paris Scheme, Mr. Horne leaves intact, namely:—THEOLOGY, JURISPRUDENCE, LITERATURE, and HISTORY, but he reverses the order of the two last-named classes. The class "SCIENCES AND ARTS" he breaks up into two classes, the first of which he calls PHILOSOPHY, and the second ARTS and TRADES." In the sub-divisions of the others he also introduces several modifications. He takes out the section *History of Religions* from the class "HISTORY," and transfers it to "THEOLOGY," dealing similarly with *Literary History*, which he transfers to "LITERATURE." The scheme, indeed, on several accounts, merits a very full description, but the following mere outline of its principal sub-divisions must here suffice:—

Class I.—THEOLOGY & RELIGION:—

1. Introductory Works.
2. Natural Religion.
3. Revealed Religion:—
 - a. Holy Scriptures.
 - b. Sacred Philology.
 - c. Councils and Ecclesiastical Polity.
 - d. Liturgies.
 - e. Fathers of the Church, and Collective Works of Theologians.
 - f. Scholastic Divinity.

- g. Systematic Divinity.
- h. Moral and Casuistical Divinity.
- k. Polemical Divinity.
- l. Pastoral Divinity.
- m. Hortatory Divinity.
- n. Mystical & Ascetical Divinity.
- o. Miscellaneous Treatises.
4. History of Religions.

Class II.—JURISPRUDENCE:—

1. Public Universal Law.
2. Ancient, Civil and Feudal Law.
3. Canon Law.

4. British Laws.
5. Foreign Laws.

Class III.—PHILOSOPHY:—

1. Introductory Works; Philosophical Dictionaries, and Encyclopædias.
2. Intellectual Philosophy.
3. Moral & Political Philosophy.
4. Natural Philosophy.
5. Mathematical Philosophy.

Class IV.—ARTS AND TRADES:—

1. History of the Arts.
2. Liberal Arts.
3. Economical Arts, Trades, and Manufactures.
4. Gymnastic and Recreative Arts.

Class V.—HISTORY:—

1. Historical Prolegomena.

2. Universal History, Ancient and Modern.

3. Particular History.

- a. Of Ancient Nations.
- b. Of the Middle Ages.
- c. Of Modern Nations.

4. Biographical and Monumental History.

5. Historical Extracts and Miscellanies.

Class VI.—LITERATURE:—

1. Literary History and Bibliography.

2. Polite Literature.

- a. Grammar.
- b. Philology and Criticism.
- c. Rhetoric and Oratory
- d. Poetry.
- e. Literary Miscellanies.

The most exceptionable parts of this scheme seem to me its severance of works on Ecclesiastical History from the class "HISTORY," and its retention of the vast and rapidly extending literature of Politics and Commerce as a mere sub-section of the class "Philosophy." On the former point, Mr. Horne has this remark:—"This subject is most commonly made a part of the class 'History,' but so many tenets and practices, which strictly belong to Divinity, are recorded in the *History of Religions*, that they cannot with propriety be placed under the general class of 'History.'" The argument is a very inconclusive one. It overlooks the close alliance between the ecclesiastical history and the civil history of, at least, all modern nations. It appears needlessly to confound the history of the Church with the history of Dogmatic Theology; obvious as is the fact, that between works such as Fuller's *Church History of Britain*, and Wall's *History of Infant Baptism*, or Heylin's *History of the Sabbath*, resemblance is but verbal. And finally, if the principle were fairly worked out, it would make sad havoc with the bibliography of the History of Nations. If the bibliographer be justified in transferring the ecclesiastical history of a people into the domain of Theology, why not transfer its military history to the "Art of War," and its parliamentary and municipal history to Political Philosophy? By a process like this the unfortunate class "History" will speedily become a withered mummy or a bare skeleton. In many other respects Mr. Horne's arrangement appears to me highly meritorious.

[§ 28. Later modifications of the "Paris Scheme" by Barbier, Brunet, and others.]

In France itself, the "Paris System," as left by De Bure, had already been considerably modified, especially in that portion of it which was necessarily most subject to change, the class "SCIENCES AND ARTS," by the bibliographers, Barbier, Achard, Brunet, and others. The salient points of these various modifications will be sufficiently apparent if we place the several re-arrangements of that one class side by side.

PARIS SYSTEM.—CLASS III.—SCIENCES AND ARTS.			
(1.) BARBIER (1806.)	(2.) ACHARD (1806.)	(3.) BRUNET (1809-42.)	(4.) TABLEAU DES PRODUCTIONS BIBLIOGRAPHIQUES (1828.)
1. Philosophy.	1. Philosophy.	1. Philosophical Sciences.	III.—SCIENCES.
2. Logic & Dialectics.	a. Collective Works	2. Physical and Chemical Sciences.	1. General Treatises.
3. Ethics.	b. Morals.	3. Natural Sciences.	2. Mathematical Sciences.
4. Economy.	c. Economics.	4. Medical Sciences.	3. Physical Sciences.
5. Politics.	d. Politics.	5. Mathematical Sciences.	IV.—PHILOSOPHY.
6. Political Economy.	e. Metaphysics.	6. Occult Philosophy.	1. Morals and Metaphysics.
7. Metaphysics.	f. Physics.	7. Fine Arts.	2. Education.
8. Physics.	g. Natural History.	8. Mechanical Arts and Trades.	3. Political Economy.
9. Natural History.	2. Medicine.	9. Gymnastic Exercises.	4. Military Art.
10. Medicine.	3. Mathematics.	10. Games.	5. Fine Arts.
11. Surgery.	4. Arts.		
12. Anatomy.			
13. Pharmacy.			
14. Chemistry.			
15. Alchemy			
16. Mathematics.			
17. Astronomy.			
18. Astrology.			
19. Perspective.			
20. Hydrography.			
21. Hydraulics.			
22. Gnomonics.			
23. Music.			
24. Scientific Miscellanies.			
25. Construction of Instruments.			
26. Arts.			

[§ 29. Ampère's Scheme.]

But in the judgment of M. Ampère such modest reforms as these were quite insufficient. For him "the path of ancient ordinance, *since* it winds," is far too devious. No course less straight than that of a cannon ball has any charm for him. In his view, Bacon, and those who have followed Bacon, in treating of the classification of human knowledge, have been too easily content with grouping the sciences "under those titles which usage has capriciously assigned to them." And accordingly he sets to work to form new groups, on a more rational system, and to give to the new groups new names: And, like the worthy Abbé Girard, or our own Bentham, the less the new names smack of the vernacular the more they are to his taste. Perfect symmetry of form also is as essential to M.

Ampère's system of classification as it was to a Greek temple. The class "Sciences," which by many of his predecessors was thought to be already too comprehensive, is by him made, like Aaron's rod, to swallow up all the others. The whole range of knowledge he assorts into two main divisions: 1. COSMOLOGICAL SCIENCES; 2. NOOLOGICAL SCIENCES. Each main division has four sub-divisions, or, as the author would probably himself describe it, is *quadrifurcate*, and, of course, each fork is four-pronged. Thus, for example, the Cosmological Sciences are 1. *Mathematical*; 2. *Physical*; 3. *Natural*; and 4. *Medical*; the mathematical are again divided into four, beginning with "*Arithmology*" and ending with "*Uranology*;" and the Physical into other four, beginning with "*Physics*" and ending with "*Oryctotechny*;" and so on. Strange as the assertion may seem, it *has* been asserted that a few years ago it was seriously proposed in the "*Conservatoire*" of the Imperial (then Royal) Library at Paris, to abandon the established system and to adopt this grand encyclopædical scheme of M. Ampère. Well may it be said, that if this idea had been acted upon, it would have turned that noble library into a bibliographical chaos.* But happily the danger is a danger which is past.

[§ 30. M. Albert's Scheme.]

Of later schemes, both in Germany and in France, as well as elsewhere, there have been many; but at present I notice only two—those of M. Albert and of M. Merlin—both of which are of quite recent date. M. Albert's avowed starting point is this:—A book, he says, is composed of two primary elements, certainly inseparable, but essentially distinct, which may be termed respectively its body and its soul:—The body, the material book; the soul, the author's thoughts, of which the book is the vehicle; and, further, in this soul or spiritual essence of a book itself, he recognizes two secondary elements, which he severally terms the ideal, or intellectual substance (*Fond idéal*), and the literary form (*Forme littéraire*). On the former of these he professes to base his classification, wholly regardless of the latter. There is much truth in his assertion, that the external form or mere costume of books, as contrasted with their true subject-matter, has been thrust into very undue prominence, in most of the bibliographical systems. But the distinction is by no means so new as his mode of stating it would suggest, nor shall we think him, I suppose, very felicitous in his selection of the

* Brunet, *ubi supra*.

methods by which he proposes to work it out. His tract, however, is, in certain respects, a good one, and will repay perusal.

Having established a basis which he regards as very revolutionary, M. Albert is anxiously constitutional in his subsequent proceedings. In settling the order and number of his classes he, of course, "casts his eyes over the world, and over all * that surrounds us," man himself included, and he finds it to be, indeed, "a mighty maze, but not without a plan." All human thoughts and all the books in which human thoughts can be clothed, seem to him to turn on three grand primal ideas: GOD, MAN, the WORLD; and thence he deduces three main classes: "THEOLOGY, ANDROLOGY, COSMOLOGY;" and then he adds, with an air of marvellous profundity, "Philosophically speaking, Man is the *indispensable medium* between the other two subjects (*l'intermédiaire obligé entre les deux autres sujets*);" † and proceeds to transpose the order of his classes, prefixing to them an introductory class which is to comprise all works that extend over two or more of the principal classes. The following will serve as a brief specimen of the manner in which the scheme is elaborated.

	No. of Sub-divisions.
Class I.—POLYLOGY	4
„ II.—COSMOLOGY :—	
1. General Treatises on Cosmology	4
2. Mathematical Sciences	35
3. Annexed Sciences, (Chronology, &c.)	16
4. Physical and Chemical Sciences	23
5. Natural Sciences	116
„ III.—ANDROLOGY :—	
1. General Treatises on Andrology . . . . .	...
2. Organic and Medical Sciences	53
3. Economic and Industrial Sciences	47
4. Political and Social Sciences	221
5. Artistic and Literary Sciences	57
6. Philosophical and Moral Sciences	21
„ IV.—THEOLOGY :—	
1. Monotheistic Religions :—	
i. General Treatises	6
ii. Judaism	38
iii. Christianity	6
iv. Mohamedanism	6

* Albert, ut supra, p. 50.

† Ibid. p. 53.

2. Polytheistic Religions :—

i. Extinct Religions	
ii. Brahmanism and Buddhism	2
iii. Magism and Sabeism	2
iv. Fetichism	2
3. Natural Theology	4

Total No. of Sub-divisions . . . 659

The details (as M. Albert has himself acknowledged) are, to a great degree, borrowed from Brunet.

[§ 31. M. Merlin's scheme.]

Prior to the appearance (1847) of the “*Researches*” of M. Albert, M. Merlin had given some general idea of his system in the preface to his Catalogue of the library of Silvestre de Sacy, but it has been much more fully developed in a letter which he addressed to the “Convention of Librarians,” assembled at New York in September, 1853. “In my opinion,” he says, “every bibliographical classification should be based upon the logical classification of the sciences . . . It should form . . . a logical chain of great classes and their subdivisions, whose formation and order are the result of a few principles which serve as a base to the system;” and then he adds very inconsistently, I think, “The great object of bibliographical classification is to assist the . . . inquirer in his search after books that he already knows to exist, and impart to him information concerning those with which he is unacquainted.” That this result can only be attained by bringing together all the works which treat of the same subject, is unquestionable; but it by no means follows that they must be arranged “in such order that the mind *shall pass naturally from each subject to that which should follow or precede it.*” In truth, this is impracticable, not only from the fact that, the more rigorously logical the learned cataloguer may make his divisions and sub-divisions, the less agreement there will be between the actual contents of the books he catalogues, and the arbitrary headings under which he has placed them, but also because the entire scheme is grounded on what I will venture to describe as a philosophical blunder. What sort of a science of Palæontology should we now possess, had all who cultivated it insisted on working it out under the supremacy of that theory—graceful but unsound—which had so many charms in its early stages; the theory, I mean, that there was

a gradual and uniform progression of organized beings, in time, the lower types regularly preceding the higher? Yet precisely similar is the assumption that underlies M. Merlin's system, which seeks to "classify human knowledge by the objects of which it treats, either directly or indirectly, all arranged in the organic scale of being, . . . according to the chronological order of creation, that is to say, rising from the most simple to the most perfect." * I am far, indeed, from denying that so able a bibliographer as M. Merlin may make a good catalogue even on a bad system. That he has long since put beyond doubt. But I deprecate the flood of bad catalogues which would surely result from the imitation of his example by average librarians; and I state my own objections the more frankly, because it does not appear that any were expressed in the highly competent assembly to which the plan was communicated.

Its details were not set forth, nor do they appear as yet to have been fully worked out, † But the main divisions run thus:—

- Class I.—POLYGRAPHY.
- „ II.—PHILOSOPHY.
- „ III.—THEOLOGICAL SCIENCES.
- „ IV.—COSMOLOGICAL SCIENCES:
 - 1. Mathematical Sciences.
 - 2. Physical Sciences.
 - 3. Astronomical Sciences.
 - 4. Geological Sciences.
 - 5. Mineralogical Sciences.
 - 6. Phytological Sciences.
 - 7. Zoological Sciences.
 - 8. Anthropological Sciences.
 - i. Sciences of Man individually.
 - a. Physical.
 - b. Moral.
 - ii. Sciences of Man in Society.
 - a. Political Sciences.
 - b. Historical Sciences.

There are many points of resemblance, it will be seen, between M. Merlin's plan and that of M. Albert. But whether this resemblance be fortuitous or not, it is quite certain that the indebtedness is not on M.

* *Literary Register*, (New York), 1854, pp. 81–84.

† "I have," says M. Merlin, "in the press, at the Imperial Printing Office, a work in which, after having reviewed, analyzed, and estimated all that has been done up to the present time, especially in France, I propose a new method," &c. But it does not appear that this work has yet been published.

Merlin's side. The points of contrast are also very noticeable. The last named author does not appear to have made those marvellous intellectual strides which enabled the former to pronounce, "philosophically speaking," that "*Deity is a conception, an intuition of the human brain,*" and the like, but ventures to continue to think that there may possibly be some relation between Deity and Creation of which man is *not* the "indispensable medium." In defining his main classes he writes thus: "Since cause precedes effect, the science which treats of God should precede all other sources, and it would be so in my classification *but* for those principles of analytical exposition, according to which every science which embraces several subjects ought to precede those sciences which treat of every such subject severally. Now "THEOLOGY" has God only for its object, and there is another science which treats both of God and of the creation, that is, "Philosophy." . . . Philosophy will then precede Theology, and after Theology will come the Sciences which relate to created things.* Thus it is that he makes the sciences relating to man, not an independent class, but the last division of "Cosmology."

[§ 32. Lord Lindsay's scheme.]

Nearly contemporaneous with the first appearance of the first outlines of M. Merlin's system as applied to the Silvestre de Sacy catalogue, was the publication of a new scheme of classification in England by Lord Lindsay, by way of supplement to his remarkable tract entitled "*Progression by antagonism.*"† Presented primarily, as a scheme for the classification of human *thought* (grounded upon certain views of the moral government of the world with which we have not here to do,) and in an extremely analytical form, its connection with our subject arises from the author's remark that with certain modifications, which he indicates, "this might be made the basis and skeleton of an extended classification for a library." Those who have read Lord Lindsay's charming "*Lives of the Lindsays,*" will readily recognize the claim of any production of his pen to respectful attention. I give, therefore, a brief outline of this scheme, open as it is to many of the objections which have been already urged against other schemes, similarly ambitious in their scope, although widely different in all respects beside.

Lord Lindsay proposes five chief classes (the fifth being added in view of the exigencies of a library,) namely:—I. THEOLOGY AND REVELATION;

* Ibid.

† 8vo, London, 1845.

II. POETRY ; III. SCIENCE ; IV. PHILOSOPHY ; V. BIBLIOGRAPHY and COLLECTIONS. "History," he makes a section of the class "Poetry," because closely akin to Poetry and Painting ; because rhythmical in early times, and always epical and dramatic." Thus, POETRY is made to include four principal sub-divisions :—1. *Symbolism* ; 2. *Fine Arts*, (Music—Dancing—Architecture—Sculpture—Painting,) 3. *Polite Literature*, (Rhetoric—Poetry proper) 4. *History* ; whilst the class SCIENCES is divided, on the one hand, into "Speculative Physical," and "Speculative Metaphysical" Sciences ; and, on the other, into "Practical Physical," and "Practical Metaphysical" Sciences.

[§ 33. Mr. Eyre's scheme.]

Still more recently, Mr. Samuel Eyre, of Derby, has circulated "Outlines of a classified scheme for the arrangement of a library," &c., (suggested, he says, by Locke's three-fold division of knowledge in the *Essay on the Human Understanding*, and by some other works.) It comprises twenty-three divisions, which are grouped into four classes : I. METAPHYSICAL, that is, concerning things beyond the bounds of mere human experience ; II. PHYSICAL, that is, discoverable by human reason, but existing independently of the human will ; III. PRACTICAL, that is, dependent upon, or arising from human actions ; IV. MISCELLANEOUS (*sic.*) The first group is nearly co-extensive with the ordinary classes THEOLOGY and PHILOSOPHY, and the second with SCIENCES, in the ordinary sense of that word. The third group embraces in its comprehensive grasp—"HISTORY," "POLITICS," "LITERATURE," and "ARTS." The last group is our old acquaintance "POLYGRAPHY," under a designation certainly more familiar, but not one jot more vernacular.

The latest scheme with which I am acquainted belongs, (like those just mentioned), to the Philosophical group, and evinces considerable originality under due restraint. It is the production of Dr. W. D. Wilson, Professor of Ethics and of Logic in the Hobart Free College, at Geneva, in the State of New York, and forms part of the closing chapter of his *Treatise on Logic*, published in 1856. Dr. Wilson proposes three principal classes, each of which, he says, "naturally divides itself into two departments, differing in the *first* class, both in the starting point and in the method ; in the *second* class they differ in the starting point only ; and in the *third* class the two departments differ chiefly in the object in view,—the one producing objects of Beauty, and the other objects of Utility." The classes and their sub-divisions stand thus :—

Class I.—THEORETICAL SCIENCES :—

Department 1. EXACT SCIENCES :

1. Meteorology.
2. Ouranography.
3. Geology.
4. Geography.
5. Chemistry.
6. Mineralogy.
7. Anatomy.
8. Physiology.
9. Botany.
10. Zoology.
11. Ethnology.
12. Psychology.
13. History.

Department 2. PURE SCIENCES :

1. Arithmetic.
2. Geometry.
3. Algebra.
4. Calculus.
5. Trigonometry.
6. Analytic Geometry.
7. Analytics.
8. Method.
9. Ontology.

CLASS II.—PRACTICAL SCIENCES :—

Department 1. MIXED SCIENCES :

1. Mechanics.
2. Astronomy.
3. Hydrostatics.

4. Hydraulics.

5. Pneumatics.
6. Acoustics.
7. Optics.

Department 2. ETHICAL SCIENCES :

1. Ethics.
2. Polity.
3. Natural Religion.
4. Jurisprudence.
5. Church Polity.
6. Revealed Religion.

CLASS III.—PRODUCTIVE ARTS :—

Department 1. FINE ARTS :

1. Gardening.
2. Architecture.
3. Sculpture.
4. Painting.
5. Music.
6. Poetry.

Department 2. USEFUL ARTS :

1. Agriculture.
2. Metallurgy.
3. Technology.
4. Typography.
5. Engraving.
6. Commerce.
7. Medicine.
8. Rhetoric.
9. Political Economy.
10. War.*

Here, then, may close our long survey of the principal schemes which have been proposed for the classification of knowledge and of libraries. I have already indicated my decided conviction that many of those which have cost their authors much thought and labour, although they may indirectly render good service to the student, are ill suited for practical application to catalogues. For that purpose, it cannot be too much borne in mind that the requisite qualities are not logical concatenation, subtle analysis, or striking terminology; but simplicity, clear definition, and (as far as may be practicable) familiar and time-honoured names. There is, however, one direction at least in which the reformer may find useful work, and the lover of novelty ample gratification. There are certain common-sense modifications as to the distinction of the *form* of books from their *substance*, and the extent to which this distinction may fairly affect their true place in a

* Wilson, *Treatise on Logic* (New York, 1856, 8vo.), 341-346.

catalogue, which are quite separable from any positive settlement of all the "laws of the universe," or any exact determination of the true place of man in its midst.

[§ 34. Proposed modifications in the details of classificatory schemes.]

Take, for example, that vast class consisting of the books which bear in common the familiar name of "VOYAGES AND TRAVELS." How many of the number have really nothing in common *but* the name. *The Voyage du jeune Anarcharsis en Grèce*, and the *Voyages en Grèce* of M. Spon; the *Voyage round the World* of De Foe, and the *Voyages round the World* of Lord Anson; the *Voyages des Papes* of John Von Müller, and the *Voyages des Missionnaires de la Compagnie de Jésus*, have all titles which look alike, and sound alike, but no bibliographer would place them in the same class. Few bibliographers, on the other hand, might perhaps hesitate to class the *Voyage de Marseille à Lima*, of a certain M. Durret, or the *Narrative of a captivity among the Indians*, of Hunter, or the *Voyage en Portugal*, of Carière, along with the voyages of Anson, or the travels of Clarke; but the first two are fictitious, and the last is the mere re-issue of a guide-book called *Tableau de Lisbonne*. Brunet does not hesitate to place the *Voyage minéralogique et géologique en Hongrie*, of Beaudant, in the class "SCIENCES," under *Mineralogy*, rather than in "HISTORY," under *Voyages*; yet the *Voyage physique et lithologique dans la Campagne*, of Breislak must be looked for in the latter, not the former.* Similar instances might easily be multiplied. Is it not then worth consideration, (and it is but a *suggestion* that I here put forward,) whether the section "Voyages and Travels" might not, with advantage, be abolished as a subdivision of "History," and its contents be distributed according to their real subject-matter and essential character? Thus the *Voyage en Italie*, of Montfaucon, would be classed with works of literary history, and the *Voyage en Icarie*, of M. Cabet, with romances. The *Voyage du jeune Anarcharsis* would then have its subsidiary place, by way of appendix, in the history of the ancient world; and the *Voyages des Papes* would occupy their proper section in that of the Church of Rome. The travels of De Luc would be sought for under Geology; those of Layard and of Vyse under Archæology, and so on. As to the purely descriptive travels, they would follow the systematic Topography of the country to which they

* Brunet, *Manuel*. Comp. Albert, *Recherches*, ut supra.

relate ; and as to the works of the traveller who is neither naturalist nor archæologist, who carries no hammer and no microscope ; who sets to work neither diggers nor dredgers, describes no country in particular, but rushes from clime to clime, as though

“ Impelled, with steps unceasing to pursue
Some fleeting good, that mocks him with the view,”

and on his return sends to press a bulky volume, which is half road-book, and half collection of bills of fare, *he* might be allowed the honour of a section to himself, by way, perhaps, of appendix to “ Universal History.”

Whatever the worth or the worthlessness of this suggestion in other respects, it is clear that on one score, at all events, it would materially simplify the arrangement of a catalogue rich in works of History. So long as in such a catalogue the history and topography of the various countries of the world, and narratives of voyage and travel in those countries form two independent divisions of the class “ History,” it is obvious that a long repetition of geographical detail is unavoidable.

The desirableness, too, of retaining the usual sub-divisions of Poetry and Prose Fiction as independent sections of the class “ LITERATURE ” seems fairly open to question. Such a classification is purely one of *form* ; it has nothing to do either with the substance or with the aim and purpose of books. The *Telemaque* of Fenelon, the *Utopia* of More, the *Nova Atlantis* of Bacon, the *Civitas Solis* of Campanella, the *Pilgrim's Progress* of Bunyan, have little, indeed, in common with *Joseph Andrews*, or with the *Waverley Novels*. The bibliographer, I think, would not be far wrong who should boldly transfer the first four to the class “ Philosophy,” and the fifth to that of “ Theology ;” and in the latter instance he would have the sanction of Coleridge, who has assigned to the *Pilgrim* a place among the “ Works of British Divines.” It cannot be denied, however, that the innovation would entail difficulties of its own, from the number of works which would lie doubtfully on the border territories, try as we may to define clearly their respective limits. With versified Poetry the task would be especially troublesome, but at all events such works as *The life and death of Thomas Wolsey*, by Storer, and the *De Arte Graphica* of Du Fresnoy, may be safely withdrawn from its domain to those of “ Historical Biography ” in the one case, and of the “ Fine Arts ” in the other.

ANCIENT CUSTOMS AND SUPERSTITIONS IN CUMBERLAND.

By A. Craig Gibson, Esq.

(READ 7TH JANUARY, 1858.)

Of the picturesque province of Cumberland it is difficult to say whether its Scenery, its Geology, its Botany, its Meteorology, its Antiquities, History, Ethnology or Philology presents the most attractive and profitable field for research and observation. Each of these offers ample scope for the powers of the most able investigators, while those of more humble ability may, with the resolution to apply it honestly and earnestly, approach any one of them with fair hope of eliciting something worthy of being recorded. Several of these subjects have been discussed already, in a manner more or less satisfactory; but none have been exhausted, and some scarcely touched. The circumstances, however, under which this paper is prepared, compel me to take up a theme requiring less labour and research than any of those mentioned, and I have selected one for the materials of which I can draw upon personal recollection and observation, and which, if less dignified, has, itself or its kindred, occupied the attention of some who hold high positions in the literature of our country. For these reasons I confine myself to noticing a few of the old customs and superstitions, which, fostered by the primitive habits and secluded position of its people, lingered in Cumberland after they had ceased to exist in other parts of the country.

Even in Cumberland, however, at the present day, we may say with the poet—

“ Many precious rites
And customs of our rural ancestry
Are gone or stealing from us ;”

and several of those I shall specify in this treatise are either obsolete or rapidly becoming so.

These ancient customs may be arranged conveniently in three classes—Feudal or territorial, Social, and Superstitious. To the first belong the tenures of lands, which, though perhaps not exclusively peculiar to Cumberland, may be noticed briefly as interesting relics of former times.

Many of the old imposts on land, such as cornage, thirlage, soccage, scutage, homage, fealty and military service, once the most important of all, have long been lost sight of, and now most of the lands in Cumberland, whether held on customary or arbitrary tenures, merely pay an almost nominal rent, besides certain fines, to the lord of the manor. Lands of arbitrary tenure pay, with certain deductions, fines of two years' value on the death of lord or tenant, or of both, and on alienation. Some pay dower to the widow, others not. Some lands pay a live heriot, which means the best animal in the tenant's possession; others, a dead heriot, that is, the most valuable implement, or piece of furniture. In Catholic times the Church also, on some manors, claimed as heriot the second-best animal the tenant might die possessed of, and on others the best. There is an old record shewing that the lord of a small manor, for the crime of seizing a heriot before the Church could satisfy her claim, was formally banned by the Bishop of Carlisle, and deprived of Christian privileges till he relieved himself from the anathema, by making restitution and doing penance. In some instances a heriot is only payable when a widow remains in possession of the tenement, and in these cases the original object of the impost has been to recompense the lord of the manor for the loss of a man's military service during the widow's occupancy. In some joint manors where two, or perhaps three, lords have claims for heriots, very discreditable, and, to a dying tenant's family, very distressing scenes are enacted; for, when it becomes known that the holder of a tenement so burthened is on his death-bed, the stewards of the several manors place watchers round the premises, who ascertain what and where the best animal may be, and, as soon as the demise of the tenant is announced, a rush ensues, and an unseemly contest for possession. This, I am glad to say, can only occur in very few localities, and they are confined to the north-east of the county. On arbitrary lands some lords claim all the timber, others only the oak, others the oak and yew, others oak and whitethorn, and so on. In some the tenant is bound to plant two trees of the same kind for every one he fells, but tenants have a right to timber for repairs, rebuilding or implements, though they must not cut down without license. Many lands are bound to carry their grain to the manorial mill to be ground and *multured*, but this custom has fallen into disuse. Most lords retain the minerals and game if they enfranchise the soil, as many have done. Many lands used to pay boons of various kinds, and some of these services are still enforced. By these were demanded so many men or boys, horses, carts, &c., in peat-

cutting time, hay time, harvest, wood-cutting and carting, and so on. In the east of the county, the tenants were obliged to send horses and sacks to St. Bees, for salt for the lord's use: some had to bring their own provisions when engaged in these services: some were entitled to a cake of a stated size for each man, and a smaller for a boy, on assembling in the morning at a fixed hour, under a certain tree, as was the custom at Irton Hall. Breach of punctuality forfeited this cake, but the work was always exacted. Certain farms in some manors were bound to maintain male animals for the use of all the tenants, subject to various conditions and regulations. Formerly many tenants paid a pound of pepper at the lord's court, others only a peppercorn, and some lands are still held by this custom. There were many other peculiar customs connected with the tenure of land which I need not describe.

Curious individual exemptions from certain burthens are to be met with occasionally. In the parish of Renwick a copyholder is relieved from payment of the prescription in lieu of tithe, paid by all his neighbours, because one of his ancestors slew a *crackachrist* (a curious misnomer for cockatrice.) This carries our imaginations back to Moor of Moor-hall and the Dragon of Wantley; but the Cumbrian monster is alleged to have been nothing more formidable than a bat of extraordinary size, which terrified the people in church or vestry one evening, so that all fled save the clerk, who, valiantly giving battle, succeeded in striking it down with his staff. For this exploit he was rewarded with the exemption mentioned, which is still claimed by his successors.

A genuine specimen of feudal observances is preserved in the custom of riding the boundaries of manors, which, in the mountain district, where the line of division is not very distinct, is performed perhaps once during each generation, by the representatives of the lords of the manor, accompanied by an immense straggling procession of all ages,—the old men being made useful in pointing out important or disputed portions of the boundary, and the young in having it impressed on their memories, so that their evidence or recollection may be made available in future perambulations. In older times, when the interests of the lords outweighed farther than in our own day the rights of the peasantry, certain youthful members of the retinue, in order to deepen the impression and make it more enduring, were severely whipped at all those points which the stewards were most anxious to have held in remembrance. These occasions always wind up with a banquet, provided on a most liberal scale by the lord of the manor, and open to all who

take part in the business of the day. A local usage connected with the landed interest, and long observed with notable regularity, was the following. When salmon were plentiful in the Cumberland rivers, and formed a very important element in the ordinary living of the occupants of adjoining lands, the tenants of the manor of Ennerdale and Kinniside claimed "a free stream" in the river Ehen, from Ennerdale lake to the sea, and assembled once a year on horseback to "ride the stream." If obstructions were found, such as weirs or dams, they were at once destroyed. Refreshments were levied or provided at certain places on the river, and as all the members of the cavalcade had to partake largely of these, either by compulsion or choice, rude practical jokes, of a very moist character, were freely indulged in, and none of these saturnalia ended without many battles; quarrels, commenced in sport, having to be settled in earnest, either there and then or at the next yearly riding. This custom has long ceased to be observed; the Ehen is thronged with weirs, and salmon hardly exist in it. Mentioning salmon reminds me of a remarkable method of taking that fish formerly practised in Cumberland, and noticed in the novel of *Redgauntlet*. This was hunting salmon on horseback, of which unique sport one Richard Graham, who, about seventy years ago, was lessee of the fisheries at the mouth of the Derwent, has left a description preserved in a note to Hutchinson's History.

The Cumbrians had their own habits of conferring territorial dignities. It is still the universal custom to call a holder of a piece of land, however small, and under whatever tenure, "a 'statesman," and formerly, in some localities, a landholder's eldest son had the Scottish title of "laird," his eldest daughter was styled "lady," and the owner of every petty manor was designated "lord," so that, according to an old writer on Cumberland manners, we might see a statesman holding the plough, Lady Bell labouring at the churn, and Lord Ritson attending the market with turnips to sell.

The ancient hostility of the men of Cumberland to the Scots still exhibits itself in various forms; even in the games of the boys it is often to be noticed, as, for instance, in their manner of playing the common game of "prison bars"—the two parties engaged in which call themselves Scotch and English, and when one of the English side passes the boundary, he cries, "here's a leap on thy ground, dry-bellied Scot," conveying a contemptuous allusion to the staple food of the Scotch. In the old moss-trooping times, as is well known, the wardens of the opposite marches, largely attended, occasionally met for the transaction of business. Strict

truce was always observed at these meetings, and, whilst the leaders were arranging the affairs of the borders, their followers, laying their enmity aside, engaged in friendly contests at various games, the principal and favourite being that of foot-ball. A trace of these old contests remains in the annual match of foot-ball still held on Easter-Tuesday at Workington, the sailors with the ship-carpenters playing against the colliers of the district. The victory is generally disputed with extreme bitterness, so that even lives have been lost in the struggle, and the orderly classes there would gladly see this lingering vestige of feudal sports follow those that have disappeared.

In treating of social customs, we must of course give precedence to those appertaining to marriage; and in Cumberland some of the most curious were seen in what were called bride-wains (the second syllable of this word, according to Sullivan, is from the Danish *vane*, a custom.) These festivals resembled, in some respects, the penny-weddings of Scotland, and proceeded thus. A young couple, poor enough in worldly goods, but resolved to encounter the trials of married life, having fixed upon the wedding-day, the whole country, for ten or twelve miles round, was invited to share in the festivities; and to accomplish this very general invitation, various means were adopted. Ten or twelve young men would scour the country on horseback or a-foot to summon distant residents; in the yard of the parish church, after morning service, the clerk, mounted upon a tombstone, gave intimation of the coming event to the congregation; and when newspapers began to circulate in the county, the same comprehensive invitation was sometimes given in their columns by way of advertisement. Some of these, cut from the *Cumberland Pacquet* of 70 or 80 years ago, are in my possession, and one specimen, partly in rhyme, as it appeared in that paper in 1786, illustrates this part of my subject so perfectly, and is so curious in itself, that I should be tempted to give it here, had it not been already republished in *Hone's Every-day Book*, *Chambers's Journal*, and elsewhere. In another of these advertisements, a countryman invites the whole county to a hunt and other sports,—to the wedding of his daughter,—and to the sale of his household furniture,—all combined to form one great festival.

The sports at these bride-wains were racing,—by horses, donkeys and men,—wrestling, fencing, leaping and other athletic games, of which the Cumbrians have always been passionately fond, and in which they still excel. After the ceremony, these, with eating, drinking and, of course, dancing,

filled up the day and night ; but the characteristic feature of these meetings was the manner of carrying out the object for which they were drawn together. The bride, seating herself in some conspicuous situation where she would be passed and seen by all the multitude of guests,—say on their way to or from the refreshment tables,—with a large wooden platter or pewter dish in her lap, invited contributions from all and sundry. All contributed according to their means, and many very liberally ; so that when the expenses were paid, a sum would remain sufficient to enable the parties interested to make a respectable start in housekeeping. This old custom has died out within the last thirty years, as also has that of having a house built by subsidizing the boon-work of neighbours, in this case chiefly the young men and women, who, always ready to help each other, to say nothing of the anticipated dance and merriment, would assemble about dawn at the appointed spot, and labouring with good will, each at an allotted task, would erect, long ere sunset, the clay walls of a dwelling for some young couple who probably had to rely upon a bride-wain for means to finish and furnish it. The walls reared and the floor laid, of the same material, the volunteer operatives would *hansel* the cottage by a dance on the wet clay floor. Those who have witnessed the energetic dancing of the Cumbrian peasantry will agree that this would be by no means the lightest part of the day's task. Many cottages with clay walls and thatched roofs, built by this method, which was called “a clay-daubing,” are still to be seen in the northern parts of the county.

A very ancient wedding custom in Cumberland was that of breaking a cake over the head of the bride and distributing it amongst the guests ; generally performed after the ceremony by the bridegroom, standing behind the bride seated on a chair, her head covered with a white napkin. Besides these there were several other bridal usages, of which, as they have happily disappeared, it were scarcely profitable now to revive even the recollection.

After marriages, we legitimately come to the customs connected with births. Of these the only one I have remarked as being confined to Cumberland, is the fashion of making, for the regalement of gossips and callers, a compound called room, or rum, butter ; I am not certain which name is correct. It is a concoction of butter, sugar, spirits and spices, and when eaten in the orthodox manner, with crisp oaten cake, is not so disagreeable as might be supposed. The quantity consumed in some country houses, after the arrival of each little stranger, is something quite wonderful,

especially in the more thinly-peopled localities, where, as would scarcely be surmised, the number of congratulatory visitors is always the greatest. The humble dwelling in one of the fell dales, of a worthy clergyman who has reared twenty-one children on an annual income of less than £70, has witnessed the preparation and consumption of forty-two stones of this Cumbrian dainty, or 28lbs. at the birth of each child.

Passing from one extreme of human life to the other, I have noticed in some of the towns of West Cumberland a funeral custom that I have not observed elsewhere. On the day preceding that appointed for an interment, the parish clerk passes through all the streets, carrying a bell of very dolorous tone, and proclaiming at the corners that all friends and neighbours are desired to attend the funeral of their deceased fellow-citizen. The country funerals are chiefly remarkable for the quantities of refreshments disposed of by the guests. An old north-country proverb tells us that "sorrow is dry;" on some of these solemn occasions I have felt tempted to append to it, "and sympathy is hungry." A curious word, now becoming obsolete, was applied to meat and drink given at funerals, namely, *arval*. A recent Philologist, already quoted, says the word is derived from the Danish *arv*, a heritage, or *arvelig*, hereditary, and adds, "there appears to be some superstition connected with the origin of the word, as if of a bequest from the deceased to ward off the danger of evil grudges." The mountain fox-hunters apply the word to the allowance of ale they are entitled to at the expense of the township wherein they kill one of those animals, which are there regarded as destructive vermin, not preserved as a means of sport. Thus they would say, "we killed him on Walna Scar, and drank his arval at Newfield."

Old observances of anniversaries have lingered in Cumberland probably later than in other parts. At Christmas the customs, but faintly observed elsewhere, are still in full force. Village children sing their ancient carols from door to door in the evenings, and the performances and salutations of the adult nocturnal minstrels are very beautifully described by Wordsworth, in the verses dedicating his sonnets on the Duddon to his brother. Bands of juvenile actors, of whose performances Sir W. Scott says—

"Who lists may in their mumming see
Traces of ancient mystery,"

still levy contributions in money and Christmas cheer in the rural localities. The antique hospitality of Cumberland glows at Christmas with

all its pristine lustre, and it is considered both unlucky and ungracious either to withhold or to decline the offer of this hospitality.

On New Year's day the only peculiar custom I have seen was what they called "stanging," called elsewhere "lifting." This consisted in seizing unwary individuals in the roads or streets, forcing them into an arm-chair—formerly upon a pole or *stang*—and carrying them off shoulder high to a public house, when they were restored to liberty on payment of a trifling ransom.

Various seasons and days had special viands assigned to them. At Candlemas, the season in some districts for making annual settlements of accounts, ale posset was eaten with great solemnity. The Monday before Lent is called Collop-Monday, this ugly word being Cumbrian for meat cut in slices, whether steaks, chops or rashers, which last are eaten on that day. On the day following, the staple dish is that devoted to the day in most parts of the kingdom. Ash-Wednesday was called *Hash*-Wednesday, and hashes or stews were the proper viands. The remaining days in the week had respectively their own dishes, which it is hardly necessary to specify.

The beginning of Lent was one of the seasons when barrings-out were perpetrated by the school-boys, who garrisoned, provisioned, and barricaded the school against the master, and generally sustained a siege of three days; otherwise they were subjected to severe tasks and punishments. At the end of that period, custom obliged the master to propose terms of capitulation to his refractory subjects, which comprised stipulations for holidays, and permission to proceed immediately to certain sports, the chief of which were foot-ball and cock-fighting. At some places a prize, in the form of a small silver bell, was provided for the latter sport, and the boy who brought the winning bird wore this attached to the button of his hat on three consecutive Sundays. Previous to its suppression by the magistracy and public opinion, cock-fighting was practised at the Cumberland schools to a very disgraceful extent. In some schools an annual offering is still made by the boys to the master, called a cock-penny, originally established for the purpose of promoting that cherished amusement of the "good old times."

The fifth Sunday in Lent was called Carling Sunday, the dish assigned to the day being "carlings," or peas softened by soaking, and then fried in butter. And the young people went about pelting each other with uncooked carlings as they do in the Italian carnivals with sweetmeats.

On Good Friday the Cumbrians regale themselves with a mess called figsue, consisting of bread and figs boiled in ale. At Easter large quan-

tities of eggs are converted into pace-eggs for distribution amongst the children, parties of whom, dressed in character, go round the different neighbourhoods, entering each house, one by one, as they are announced by their leader, in a song for the occasion, each striking in as he enters and taking his place in a march round the apartment. There is a belief prevalent amongst the children, that if they go out on Easter Sunday without some new clothing, they will be subjected to grievous indignity by the crows. Mulled ale or egg-flip is drunk in great quantities in the evening, the men resorting to the village inns for the purpose.

Far into the last century, Beltane fires were lighted all over the country on the eve of May-day. It is a very curious fact that this relic of the old pagan rites of the country should survive so many ages of christianity. Boughs of the mountain ash, still called witch-wood, and supposed to be protective against all evil influences, were carried by the people round these fires; and, within my own remembrance, leaves and twigs of this tree were inserted into keyholes and suspended over doors of houses to prevent witches or other infernal agents from injuring the inmates.

On All Saints' eve the incantations and ceremonies were practised that Burns's poem of Hallow-e'en has rendered so familiar, besides a few not mentioned in it.

On the eve of St. Agnes, young women fasted and went backwards to bed, in order to dream of their future husbands.

This may be classed amongst the superstitious customs, as also may some other rites practised at any season with a similar object, such as placing a four-leaved clover, nine peas in one pod, &c., under the pillow. The peel of an apple or turnip taken off entire, had wonderful virtues of this kind; thrown carelessly on the floor, it would form the initials of the destined partner; and, when hung over the outer doorway, the first man that entered was the man himself, or, if married, the Christian names would be similar. Another favourite conjuration was breaking the first egg laid by a pullet into a glass of water, where it was expected to arrange itself so as to shew the occupation of the future husband, as in the form of a ship for a sailor, a plough for a farmer, and so on. The list of ceremonies of this description might be greatly extended.

Amongst other superstitions, omens, good and bad, are very abundant in Cumberland. It is a bad omen to see the new moon for the first time through glass, or without money in the pocket; but if young girls turn their aprons at first sight of the new moon, and wish, their wishes will be

granted. It is a good omen to see the first foal of the year with its head towards the spectator: a bad one if reversed. It is lucky to find a piece of iron, but very unlucky to pass it—it should be picked up, spit upon, and thrown over the left shoulder. It is unlucky to help any one to salt, and every grain of wasted salt brings a grain of sorrow to the waster. A hare crossing the path is so ominous of evil, that I have known people turn back and defer important errands when it has occurred. Whistling maids are very unlucky, and so are crowing hens. In short, all sorts of incidents are made to bear superstitious fruit; and events the most commonplace are endued with a significance that ordinary people would never dream of attaching to them. I suspect that interchanges of omens have been made across the border, for very many that are common in Cumberland are also current in Scotland.

A curious superstition is cherished with regard to bees. When a member of a household dies, it is considered necessary to make formal announcement of the event to the inmates of the apiary, otherwise they would either die also or desert the hives.

The not uncommon belief that a dying person cannot die on a bed that happens to contain any feathers of the pigeon also prevails in Cumberland; and I have seen more than one instance when on the mere possibility of that being so, patients, sinking slowly, were taken out of bed and laid on the floor to die. As the fatal result is precipitated by the removal, each case strengthens the superstition.

Their faith in the virtues of what they call need-fire as a remedy for, and preventive of, disease in cattle, furnishes another instance of the long existence of a very ancient superstition. Sir Walter Scott, writing in 1828, says, "This charm was used within the memory of living persons in the Hebrides, in cases of murrain amongst cattle." Sir Walter says that need-fire means *forced* fire, in allusion to the means used to procure it. Mr. Sullivan, on the contrary, says it means cattle-fire, and comes from the Danish *nod*, whence also is the northern word nolt or nowte. In 1841, when the cattle-murrain prevailed in Cumberland, I had many opportunities of witnessing the application of this to animals both diseased and sound. To ensure its efficacy it was necessary to observe certain conditions. The fire had to be produced at first by friction, the domestic fires in the neighbourhood being all previously extinguished; then it had to be brought spontaneously to each farm by some neighbour unsolicited; and neither the fire so brought, nor any part of the fuel used, must ever have been under a

roof. These conditions being kept, a great fire was made, and the cattle driven to and fro in the smoke. One honest farmer who had an ailing wife and delicate children passed *them* through this ordeal, as was averred with most beneficial effect. Another, a near neighbour of my own, inadvertently carried the fire just brought to him into his house to save it from extinction by a sudden shower. It was declared that, in his case, the need-fire would be inoperative, but, as I remember, his stock did as well ultimately as any other.

Charms for physical ailments incident to man, are popular as well as pleasant remedial agents. Different texts of scripture, written on scraps of paper by some one endowed with the requisite powers, will check hæmorrhage, relieve toothache, and cure ague and jaundice, but in the last disease the action of the charm must be expedited by a mysterious pinch of the left ear. Whooping-cough was cured by passing the patient under the belly of a donkey, or taking him into some excavation under ground. An eel's skin loosely fastened round a limb exempts it from all liability to cramp; and a living toad carried about the person in a box is a certain preventive of rheumatism, though some prefer for this purpose a lump of brimstone in the pocket. Charms for the eradication of warts are numerous; but perhaps the most approved, as well as the most elaborate, is to count them carefully, then to put the same number of little stones or knots of oat straw into a linen bag, and throw it over the left shoulder where two roads cross, and the excrescences will speedily depart from the hands of the thrower and settle upon those of the finder. This list might also be greatly extended, for charms and other popular remedies of equal efficacy are so many and so much believed in, that it is difficult to understand how disease happens to exist amongst them at all.

Individual superstitions, or what may be called superstitious whims, are of frequent occurrence; with one striking instance of these, dating from the middle of last century, I became acquainted in my boyhood. In a field in the parish of Harrington there is a low square pillar of stone, bearing upon its summit the following inscription, still very distinct.

“Joseph Thompson may be here found,
Who would not lie in consecrated ground;
Died May 13th, 1745,
Aged 63 when he was alive.”

Of Joseph Thompson, the story current amongst the old people was this:—Either from disease or injury, he underwent amputation of a thumb, which according to use and wont, was carefully interred in the burial

ground surrounding the parish church. Now, it is well known that after amputations the extremities of the divided nerves in the stump occasionally undergo inflammatory action, causing intense pain which may endure long after the wound is healed, and which appears to the patient to have its seat in the amputated part. Joseph Thompson suffered from this painful affection; and, unable to account for it otherwise, at length persuaded himself that it was attributable to the burial of his thumb in the church-yard; acting on this persuasion, he had it disinterred and buried elsewhere, and the pain ceased either immediately or soon enough to connect, in his mind, the relief with the removal. Inferring then, that since so small a member as the thumb had suffered so terribly in consecrated earth, the whole body, if buried there, would be subjected to tortures proportionably greater, he exacted, before he died, a promise that his friends would inter him in the field where he has rested now for more than a hundred years.

Of the supernatural beings in whose existence they believe, I think we must give precedence to fairies. Although no longer supposed to exist, legends, connected with this branch of popular mythology, are still rife, and of these the following may suffice as a specimen:—The tourist who ascends the noble mountain called the Old Man of Coniston, may notice, from the road approaching the copper mines, a narrow excavation or niche cut obliquely across the face of a rocky precipice, high above the works. This is called by the people there, “Simon’s Nick;” and it is related that long ago, when fairies were something more than a traditional myth, a miner named Simon obtained, under their direction, large quantities of rich ore from that niche, to the great mystification of his neighbours, who had not been able to find any trace of copper there. Simon underwent much questioning as to the source of his inscrutable success, but secrecy being one of the articles of his treaty with the fairies, he for a long time resisted all attempts to make him divulge it; being, however, unhappily addicted to beer, under the influence of that great subverter of all discretion, he violated this important condition of the contract, and his good fortune at once ceased. Through self-reproach and vexation he afterwards became reckless in the pursuit of his dangerous employment, and soon paid the penalty of his weakness with his life, leaving his name to the singular looking excavation that remains to attest the truth of his story.

As there were fairies in the land long ago, so also there were giants; and proof of their existence has been found in the gigantic skeletons disinterred at Aspatria, St. Bees, and other places in the county. It is also

believed that the two remarkable pillars in Peurith church yard, standing fifteen feet apart, mark the length of the grave of *Ewan Cæsarius*, an ancient hero, who once amused his leisure by slaying wild boars and other monsters in the adjacent forest of Inglewood. These, however, dwindle to very contemptible proportions when compared with the popular conception of the giants of old. There is, in the Solway Frith, a few miles north of Allonby, a bank consisting of stones, and called Dub-Mill Scar. This Scar was formed by stones that fell short in a pelting-match between a Cumbrian giant, who resided on or in Skiddaw, and one of the same race who inhabited the Scottish mountain Criffel, on the opposite coast. Evidence of the truth of this legend is discovered in the stones forming the bank, which are said to be of the same formation as those upon the two mountains.

Localised superstitions assigning to particular spots their own peculiar, and often appropriate, apparitions, are common enough in most parts of the county. Some of these are attached to streams, as that at Salter-beck near Workington; some to woods, as the spectral horseman in the Devil's gallop, near Hawkshead; some to lanes, as the headless women at Branthwaite Nook; some to hills, as the murdered gardener's ghost on Oxenfell; some to lakes, as the Crier of Claife on Windermere, and the phantom boat on Thirlmere; some to lonely waterfalls, as Airey force and Dungeon-Ghyll; some, of more social tastes, to the streets of populous towns, as Whitehaven; some to ruins; some to inhabited houses, and some even to ships. Many of these, so far from being common-place apparitions, possessed features highly picturesque, either in the story of their origin, or in their modes of exhibiting themselves.

The boggle, for instance, at Salter-beck, a small stream that runs into the sea a little south of the Derwent, was wont to appear in the startling shape of a coffin borne by four drunken sailors, staggering along and vanishing suddenly with a loud cry as they reached the middle of the water-course. This, it was said, originated in the catastrophe that befel the funeral *cortège* of a noted smuggler, who like "Will Watch" in the song, was at the dead of the night being "borne to the earth by the crew that he died with;" and with them was swept into the sea by this little stream, then unusually swollen by rain.

How the fall on Ullswater, called Airey force, came to be a haunted place is familiar to all readers of Wordsworth; and Coleridge, in his beautiful

mystery Christabel, has poeticised the spirits that haunt the vicinity of Dungeon-Ghyll.

At Whitehaven a spectre, in the shape of a huge dog, used to appear in the streets when a fatal shipwreck or colliery accident was about to occur, and to announce the approaching fatality by howling fearfully at the dwellings of those whose relatives were to suffer.

Old fortresses were revisited by prisoners who had been wrongfully detained or put to death in them long ago. I remember being deeply interested when passing through Carlisle to school, by the story of one of the Castle-sentinels, then in Hospital in consequence of a visit he had received while on duty the previous night, from Queen Mary of Scotland. As will be remembered, the Castle of Carlisle was the first prison in which that lady, the most unfortunate of an unfortunate line, was immured when she sought a refuge in England.

If the author of the book, called "The Night-Side of Nature," were inclined to publish a second series of her goblin-tales, there is abundance of material for such a purpose in the accounts of apparitions yet current in Cumberland; but though they are still heard of, they have ceased to appear; and it is by no means so common now as formerly to meet with persons who have really experienced any well-accredited visitation from the invisible world. The breaking-up of old associations and the expansion of ideas consequent upon extended intercourse with the world, have rooted out many of the most cherished delusions of our ancestors; and as the faith in supernatural agencies has waned, the fancies of the superstitious, or possibly of the diseased, have ceased to receive the credit so implicitly accorded to them of old. But there is one article of superstitious faith that I should regret to have expunged from the creed of the Cumbrians, the persuasion, to wit, that those grand monuments of British antiquity, of which their county possesses some of the finest in the kingdom, are guarded by spirits who have the power, more than once manifested, of compelling the elements to rush in to the rescue, whenever impious hands have been raised for their destruction or injury.

NOTE. One or two localities not strictly in the county treated upon are mentioned, but they are so closely adjoining, and the people so much Cumbrian in manners and habits, that customs there may be classed amongst Cumberland customs.

AZIMUTH CARD FOR THE LATITUDE OF LIVERPOOL.

By Mr. W. W. Rundell.

(READ 15TH JANUARY, 1857.)

The accompanying diagram for showing the true bearing of the sun at any minute of time, by mere inspection, is intended for the use of captains of ships, when approaching or leaving the port of Liverpool, and will enable them to ascertain, with great ease, if their compasses are correct, or, the amount of deviation for which allowance must be made if their compasses are in error.

DESCRIPTION OF THE DIAGRAM.

The horizontal lines numbered from 0 to 60 in the side margins show degrees of altitude from the horizon.

The vertical lines, numbered at the top and bottom of the diagram, indicate in degrees, *azimuths*, or angular distance from the meridian measured on the horizon,—the corresponding points of the compass are also shown; the morning points at the top, and the afternoon points at the bottom of the diagram.

The curved lines running from the meridian (marked S for south,) to the straight line at the bottom (marked horizon) represent the sun's path for each degree of north and south declination, every fifth degree being conspicuously numbered. These lines are divided to show hours and minutes of apparent time, reckoned from noon (*hour angles*); the hours being indicated by the usual Roman numerals, the quarter hours by dark lines, and the minutes by small dots, every fifth minute having a larger dot.

RULES FOR USE.

I. By a watch, set to apparent time, at place, find how many hours and minutes from noon (the nearest five minutes will suffice); observe where the line representing the *time from noon* meets the line of *declination* for the day of observation; the nearest vertical line to this point will show the sun's true bearing.

II. If altitude be used instead of time—observe where the line of altitude meets the line of declination; the nearest vertical line shows the sun's true bearing.

III. If the *magnetic bearing* of the sun be required, apply the variation to the true bearing. At Liverpool, for 1858, the variation is 23.50 W.

REMARKS.

It will be evident to the navigator that the diagram may also be used to find the true bearing of the moon, the planets, and many bright stars, in the same manner as for the sun; and thus the indications of the compass may be checked at night, when the heavenly bodies are visible, with nearly the same facility as by day.

The lines of declination have been carried to 30° above the equinoctial line, and to 28° below it, so as to include extreme declinations of the moon and planets, and the declinations of many bright stars.

EXAMPLES.

OBJECT.	ALTITUDE.	Hour Angle, OR, TIME FROM NOON.	DECLINATION.	TRUE AZIMUTH.	MAGNETIC BEARING.
Sun.	..	3 h. 11 m. P.M.	23° S.	S. 43° W.	S. 67° W.
Sun.	..	11 h. 5 m. A.M. (or 0 h. 55 m.)	16° S.	S. 14° E.	S. 10° W.
Moon.	18° (P.M.)	..	28° N.	N. 67° W.	N. 43° W.
Venus.	15° (A.M.)	..	25° N.	N. 68° E.	E. 2° S.
Aldebaran.	..	5 h. 30 m. P.M.	16.13 N.	W. 4° N.	W. 28° N.

It should be observed that when *time* is used with this diagram to obtain the bearing of a heavenly body, a difference of one or two degrees in latitude will produce only a small error in the azimuth; the diagram will therefore be sufficiently correct for any part of the Irish Sea.

A gimballed *Dumb-Card*, with adjustable sight vanes, lubber line, &c., is strongly recommended for ascertaining the true direction of the ship's head, in connexion with this Azimuth Card, as much more convenient and accurate than the ordinary Azimuth Compass.

ON THE LEPIDOPTEROUS INSECTS OF THE DISTRICT AROUND LIVERPOOL.

By Mr. Charles Stuart Gregson.

(READ 17TH DECEMBER, 1857.)

(*Continued.**)

I now lay before the Society the last part of my list of the Lepidoptera of the district around Liverpool. That such lists may seem dry and unprofitable to some of our friends, I can perfectly understand; but when viewed as guides to those who are now growing up, I have no doubt but you will agree with me, that to them, at least, they will prove invaluable *time-savers*. And as it has been well said, that he who can increase the growth of corn in a given space, is a benefactor to his country, so they who can enable a man to do more work, or to gain more knowledge, in a given time, will not have lived in vain. The rising generation will owe much to your Society for what it has already done, and for what it is eventually likely to do; for, without such a society, this and similar lists could not possibly have been published; since, though the labour entailed may be, and, in the present case, is, a labour of love, the pocket is not so elastic as the will, especially among the practical naturalists; and could not possibly bear the strain of a publisher.

I have endeavoured to make more errors of omission than of commission; and whenever I have doubted the locality given to me by others, I have omitted the species, choosing that those who follow me shall have the pleasure of adding to the lists, rather than that I should run the risk of sending a collector about the country in the busy season on questionable authority.

I have to thank those who have given me information, and have acknowledged it in the course of this paper; but for the body of the notes I have referred to memoranda made during the last twenty years or thereabouts.

* See Vol. vii., p. 237, Vol. viii., p. 153, and Vol. ix., p. 165.

PART VII. SECTION 10.

HETEROCERA.

CRAMBIDÆ.

FAMILY 1.

Genus 1. CHILO.

C. forficellus, Thbg.—In most swampy places where wild mint grows, particularly in the parish pits at Liscard behind New Brighton. June and July.

C. mucronellus, Sco.—I have seen a specimen of this species taken in our district, but could not ascertain the precise locality. I fancy Bidston marsh.

FAMILY 2.

Genus 2. CRAMBUS.

C. hamellus, Thbg.—In the rough plantations beyond Eastham. July.

C. Dumetellus, Hub.—Grassy places on the sand hills at Wallasey, particularly near the rabbit warren. July.

C. pratellus, Lin.—Abundant upon waste land and damp pastures. Summer.

C. pascuellus, Lin.—Plentiful among heath in Jackson's wood and on Prenton hill. July.

C. hortuellus, Hub.—Plentiful behind New Brighton hotel. July.

C. falsellus, W. V.—Upon old moss covered garden walls around Hooton.

C. Pinetellus, Cl.—This seems a scarce insect about here. All I have seen I took from the young firs in Jackson's wood by beating. July.

C. latistrius, Haw.—Not uncommon among *Pascuellus* in Jackson's wood, Claughton; on the wing from dusk until quite dark. I have taken a few on Crosby sand hills, but this appears to me to be a most unlikely place for it. July.

C. culmellus, Lin.—Everywhere. July.

C. inquinatellus, W. V.—In the rough plantations near Hooton. End of June, and July.

C. geniculellus, Haw.—Wallasey sand hills, grassy places. July.

C. perllellus, Scop.—Sand hills, and Kirkby and other mosses. July.

C. selasellus, Hub.—Sefton meadows, on the banks of the river Alt. July.

C. Warringtonellus, Sta.—On the wet parts of Simonswood moss. July.

PHYCITIDÆ.

FAMILY 1.

Genus 1. APHOMIA.

A. colonella, Lin.—Comes to sugar in the plantations at Wallasey. I have recently ascertained that the larvæ of this species live in wasp nests; it has long been known to frequent bee hives in the south of England.

Genus 2. ACHROREA.

- A. grisella*, Fab.—Where bees are kept; fortunately not abundant in this district. I have seen the honey in bee hives quite destroyed by this little pest in the south of England.

FAMILY 2.

Genus 1. PEMPELEA.

- P. dilutella*, Hub.—Not often met with; I have taken it at Prenton, and in an old lane at Prescott. June.
- P. carbonariella*, F.v.R.—Is plentiful upon the burnt patches on mosses, where it seems to remain upon black places in preference to any other locality. July.
- P. palumbella*, W. V.—Edges of swampy places in Jackson's wood and at Hooton; on the wing from five to seven p.m. July.

FAMILY 3.

Genus 1. ANERASTIA.

- A. lotella*, Hub.—Plentiful among the star grass on the sand hills. July.

Genus 2. EPHESTIA.

- E. elutella*, Hub.—Plentiful in the streets near the docks, in June and July. On the wing at evening.
- E. semirufa*, Haw.—Plentiful in "Twigg and Crosfield's" rice and cocoa mills, Bedford Street. June, July, August, September.
- E. interpunctella*, Hub.—Sitting upon warehouse doors and walls where fruit and grain have been stored; Chapel Street, Water Street, Temple Court, &c. August, September.

Genus 3. HOMŒOSOMA.

- H. nimbella*, Zel.—Not uncommon at Flaybrick hill among brambles, or at Wallasey sand hills, but local there opposite the lane end which leads to Wallasey village, and also on some grassy hillocks about three hundred yards lower down towards Leasowe. On the wing at dusk.

FAMILY 5.

Genus 1. ACROBASIS.

- A. consociella*, Hub.—Bred from oak leaves collected at the rough plantation beyond Hooton. July.
- A. tumidella*, Zel.—I have seen one specimen taken in our district, Cheshire. No locality given.
- A. augustella*, Hub.—I once met with this insect in Prenton village and took six specimens, which are all I have seen. July, 1852.

Genus 3. CRYPTOBLABES.

- C. bistrigella*.—A single specimen, in Woolton wood, is all I have seen here, beat from a young birch in June.

Genus MYLEOIS.

M. recurvella, Gr. ?—A specimen of this species was shewn to me lately, said to have been taken here. No locality given.

PART VIII. SECTION 11.

HETEROCERA—TINEIDÆ.

FAMILY 1. EXAPATIDÆ.

Genus 1. EXAPATÆ.

E. gelatella, Lin.—Taken on an old fence at Rainhill. October, 1852.

Genus 2. DASYSTOMA, Curt.

D. salicella, Hub. Near Bromborough mill, and at Huyton; old mixed hedges. End of April.

Genus 3. CHIMABACCHE, Zell.

C. phryganella, Hub.—Plentiful at Eastham wood, flying about two o'clock p.m. October.

C. fagella, W. V.—Plentiful in woods, in April, on the tree trunks.

FAMILY 2. TINEIDÆ.

Genus 1. TALÆPORIA, Zell.

T. pseudobombycella, Hub.—Cases plentiful around Bidston hill, on heath and tree trunks. Spring.

T. inconspicuella, Sta?—Cases found upon Scotch fir trees at Jackson's wood, by Mr. Diggles, but not bred.

Genus 3. DIPLODOMA, Zell.

D. marginepunctella, Step.—Single cases found on old posts, near Simonswood moss. I have seen a series, in the perfect state, taken in the district, but I do not know where; certainly in Cheshire.

Genus 4. XYSMATODOMA, Zell.

X. melanella.—I took the only specimen I have seen here in Prenton wood on lichen. July 3rd.

Genus 5. OCHSENHEIMERIA, Hub.

O. Birdella, Curt.—Plentiful in a sand hole in the field opposite Hose farm, behind New Brighton. June.

O. Bisontella, Lienig.—On the slope inside Bidston park wall, near the lighthouse. August.

Genus 7. TINEA, Zell.

T. imella, Hub.—Three specimens only: one by Mr. Edmondson, and two taken on old posts, Linacre marsh, by myself. June. Is it a feeder on rotten timber?

- T. ferruginella*, Hub.—In 1853 I met with this species upon rotten fir logs lying in Kirkby wood—fir. July.
- T. rusticella*, Hub.—Plentiful in outhouses and store rooms.
- T. fulvimitrella*, Sod.—First discovered by P. H. Newnham, Esq., in Pigue lane, near my house, on an old decaying oak tree: was then plentiful.
- T. tapetzella*, Lin.—A destructive insect to woollens in warehouses and store rooms.
- T. arcella*, Fab.—Once in an old hedge near Little Britain at Kirkby.
- T. Granella*, Lin.—In profusion in grain stores.
- T. cloacella*, Haw.—Plentiful in rotten posts in old fences about Knowsley and Kirkby.
- T. misella*, Zell.—Plentiful around Jones's farm outbuildings at Tranmere. June; feeds in the granaries there.
- T. pellionella*, Lin.—Plentiful in store rooms; in houses.
- T. fuscipunctella*, Haw.—Abundant in stables, &c.
- T. pallescentella*, Sta.—A species I discovered in the streets of Liverpool several years ago, which has not been taken any where else. I took one specimen in Hanover street, this summer.
- T. merdella*, Zel.—Discovered by Mr. N. Cooke in wool warehouses, hitherto unique in Prof. Zeller's collection. July, August.
- T. nigrifoldella*, Greg.—Discovered in wool warehouses by myself. Plentiful. July, August.
- T. Lapella*, Hub.—Old hedges, not scarce. June.
- T. biselliella*, Hum.—Plentiful.
- T. nigripunctella*, Haw.—Two specimens are all I have taken; Wallasey, near Mrs. Boode's monument Does it feed upon rotten gorse?
- T. semifulvella*, Haw.—Bred from old birds' nests. Many specimens have been taken by Mr. Almond and others on the Claughton park fences.
- T. bistrigella*.—Birchwood, Woolton. May.

Genus 8. LAMPRONIA, Zell.

- L. quadripunctella*, Fab.—Plentiful where wild roses grow; flying in the morning early. June.
- L. Rubiella*, Bjk.—In profusion in old gardens among the raspberry trees, and on the mosses where raspberries grow wild. June.

Genus 10. INCURVARIA, Haw.

- I. muscalella*, Fab.—Plentiful in hedges in May, especially where birches grow, as at Warbrick moor, &c.
- I. pectinea*, Haw.—This species is in plenty amongst birches in April.

I. Oehlmanniella, Hub.—Not often met with around here, yet I have taken it at Birch wood, Woolton, Bidston wood, and at Hooton. May.

Genus 11. MICROPTERYX, Zell.

M. calthella, Lin.—New Brighton, Patrickwood, and at Childwall, freely in buttercups and other flowers. May.

M. Seppella, Fab.—Not scarce at New Brighton. May, June, in flowers.

M. Tunbergella, Fab.—Croxteth and other woods where beeches and hollies grow. May. Beat the hollies for them.

M. purpurella, Haw.—Plentiful amongst young birches on the mosses. April.

M. semipurpurella, Step. } With *purpurella*—if not all one species, I am
M. unimaculella, Zett. } mistaken.

M. Sparmannella, Bosc.—Amongst the young birches on Simonswood moss; local. Early in May Pass “Pye’s” farm, and make for the first birch plantation from there.

M. subpurpurella, Haw.—The lane leading from Eastham wood to Bromborough is the best place I know for this species. Beat hollies near oaks in May for it.

Genus 12. NEMOPHORA, Hub.

N. Swammerdammella, Lin.—Common in woods. June.

N. Schwarziella, Zell.—Common in old lanes. May.

Genus 13. ADELA, Lat.

A. Fibulella, W. V.—In the lane which leads through Patrick wood, on flowers. May. Evening.

A. rufimitrella, Scop.—Bidston marsh, below the plantations, at noon, in the flowers of “*Cardamine pratensis*” when the sun shines. May.

A. viridella, Scop.—Common flying about four o’clock p.m. in Eastham wood. June. At other times of the day at rest on and under fern.

A. Degeerella, Linn.—I have met with this beautiful long horn, in plenty, on Rainford moss fallows, near the wood.

FAMILY 3. HYPONOMEUTIDÆ, Sta.

Genus 1. SWAMMERDAMIA, Hub.

S. apicella, Don.—May be found in mixed hedges, especially where blackthorn grows. April and May.

S. griseocapitella, Sta.—In the birch and alder plantations on the moss at Rainford. June.

S. Casiella, Hub.—Not uncommon in thorn hedges at Claughton and Prenton. June.

S. Pyrella, Vill.—Thorn hedges general. May and August.

Genus 3. HYPONOMEUTA, Zell.

H. Padellus, Lin.—Thorn hedges around Upton. July.

H. Euonymellus, Scop.—Upon *Euonymus Europæus* in Claughton Park. July.

H. Padi, Zell.—Taken by Mr. Nixon at Hale, upon cherry trees.

Genus 6. PRAYS, Hub.

P. Curtisellus, Don.—Where ash trees grow. July.

FAMILY 4. PLUTELLIDÆ

Genus 2. PLUTELLA, Schr.

P. Cruciferarum, Zell.—A very common insect. May and September.

P. porrectella, Lin.—In my own and other gardens where white rock is grown, feeds in the flower buds. July.

P. Dalella, Sta.—May be beat and smoked out of gorse and heather bushes on Bidston hill in September.

Genus 3. CEROSTOMA, Lat.

C. radiatella, Don.—Croxteth woods. September.

C. costella, Fab.—Woods in September.

C. nemorella, Lin.—Bidston park wood, near where honeysuckle grows. August.

C. Xylostella, Lin.—Where honeysuckles grow in lanes. June.

FAMILY 5. GELECHIDÆ.

Genus 1. ORTHOTÆLIA, Step.

O. Sparganella, Wen.—In pits near Birkenhead where *Sparganium* grows. July—dusk.

Genus 2. SEMIOSCOPIS, Hub.

S. Avellanella, Hub.—Bidston park wood. April, upon tree trunks.

S. Steinkellneriana, W. V.—About Upton in mixed hedges, and upon Mountain ash at Bidston. April.

Genus 4. PHIBALOCERA, Step.

P. Quercana, Fab.—Eastham and other woods. July.

Genus 5. EXÆRETIA, Sta

E. Allisella, Sta.—Where *Artemisia vulgaris* grows. July.

Genus 6. DEPRESSARIA, Haw.

D. costosa, Haw.—Where broom and gorse grow. July.

D. liturella, W. V.—Where *Centaurea nigra* grows. July.

D. Umbellana, Step.—Amongst gorse. August to April.

- D. assimilella*, Treit.—Broad Green and Roby, on broom. July.
- D. nanatella*, Sta.—Under gorse bushes at New Brighton in August. Evening.
- D. atomella*, W. V.—Bidston marsh where *Genista tinctoria* grows. September.
- D. arenella*, W. V.—Everywhere.
- D. propinquella*, Treit.—Sand hills on the coasts. August.
- D. subpropinquella*, Sta.—With *propinquella*.
- D. Alstræmeriana*, Clerck.—With *nanatella*.
- D. purpurea*, Haw.—At Prenton and on the sand hills. August to April.
- D. Hypericella*, Hub.—Childwall, where *Hypericum perforatum* grows. July.
- D. conterminella*, Zell. In the plantations at Wallasey where willows grow. Comes freely to sugar. July.
- D. Angelicella*, Hub.—On Bidston marsh amongst *Angelica sylvestris*. July.
- D. Carduella*, Hub.—Sand hills near Leasowe castle. September.
- D. ocellana*, Fab.—Amongst mixed hedges where *sallows* grow. April.
- D. Yeatiana*, Fab.—Sand hills from New Brighton to Leasowe; under banks. August.
- D. applana*, Fab.—Everywhere where *umbelliferæ* grow.
- D. ciliella*, Sta.—Plentiful around Bidston and Upton, especially in lanes. April.
- D. rotundella*, Doug.—Leasowe sand hills, where *sea-holly* grows. August.
- D. Pimpinellæ*, Zell.—I took a single specimen of this species in August, 1850, on the hill above New Brighton. Near where the gorse grows, search.
- D. albipunctella*, Hub.—Amongst *Pimpernel*; Wallasey, near the mill, and at Hightown. August.
- D. pulcherimella*, Sta.—Jackson's wood and Upton; and on the waste lands between there and Bidston. By smoking. August, September.
- D. Douglasella*, Sta.—A scarce species. Crosby sand hills. August. Only four specimens yet taken.
- D. Weirella*, Sta.—I have met with several of this species by smoking, where *Anthriscus sylvestris* grows. Early in August.
- D. Chærophylli*, Zell.—Prenton and Woolton, near farm houses and dirty gardens. August.
- D.*—————?—A species not yet determined, taken on the waste land at Wallasey amongst blackthorn bushes.
- D. Badiella*, Hub.—On waste lands throughout the district. September.
- D. Pastinacella*, Dup.—Stourton and West Kirby by beating hay and grain stacks. September.

D. Heracliana, De G.—Wallasey mill and district around. August, September and April.

Genus 8. GELECHIA, Zell.

G. cinerella, Lin.—Road side between Poulton and Wallasey. July.

G. rufescens, Haw.—Road sides and clay banks on the coast. July.

G. Populella, Lin.—On the sand hills amongst the small sallows. July.

G. temerella.—On the sand hills at Crosby, amongst the small sallows.

G. lentiginosella, Tis.—First discovered by Mr. Almond feeding upon the Dyer's weed, on Bidston marsh; the locality pointed out to me by him, a dry bank.

G. fumatella, Doug.—This species still remains local on our sand hills; it is taken between Wallasey and Leasowe about the middle of the hills. July.

G. ericetella, Hub.—Plentiful upon Bidston hill in June and July.

G. mulinella, Tis.—Wherever gorse is found. July.

G. sororculella, Hub.—Amongst the small sallows on the sand hills; comes to sugar. July.

G. longicornis, Curt.—Confined to the mosses, where it may be taken on the wing in May, or may be smoked out of bushes of heath.

G. diffinis, Haw.—Bidston hill, not abundant; on the mosses in profusion. June, July, August.

G. terrella, W. V.—Everywhere. July.

G. desertella, Edl.—On the sand hills all summer.

G. Artemisiella, Tish.—Plentiful among wild thyme on the sand hills in July.

G. senectella, Fv. R.—With artemisiella. July and August.

G. mundella, Dougl.—Sand hills on the coast under overhanging banks. May.

G. affinis, Haw.—On moss covered walls. July.

G. quadripunctella, Haw.—In profusion on the sand hills with mundella, through the summer.

G. domestica, Haw.—Old walls and old hedge cops where wiry grass (*Festuca*) grows.

G. proximella, Hub.—Plentiful around the mosses in May and June, generally sitting upon alder tree trunks.

G. vulgella, Hub.—In hawthorn hedges. July.

G. fugitivella, Zell.—May be beat out from Croxteth hall to Wright's farm, and upon the trunks of trees in Croxteth wood.

G. Æthiops, West.—Plentiful upon the mosses, especially where they have been burnt, sitting upon the scorched places.

- G. distinctella*, Zell.—Hitherto a scarce species. I have taken a few in the centre part of the Wallasey sand hills. August.
- G. celerella*, Doug.—Leasowe sand hills, under banks in September. I cannot find out the habits of this species. Its flight is exceedingly rapid.
- G. costella*, St.—A single specimen is all I have met with, beat from *Solanum dulcamara*; Olive Mount. July.
- G. maculea*, Haw.—Not uncommon near gardens in Wirral in the hedges. June.
- G. tricolorella*, Haw.—In the same place as *maculea*, but generally a few weeks later among *Stellaria holostea*.
- G. fraternella*, Dougl.—In hedge banks, where *Stellaria uliginosa* grows. Prenton, &c.
- G. maculiferella*, Mann.—A single specimen in my cabinet is all I have seen, and I have no record of its capture.
- G. marmorea*, Haw.—Abundant on the sand hills from May to October.
- G. dodecella*, Lin.—Wherever Scotch firs grow (*Pinus sylvestris*). July.
- G. triparella*, Zell.—On the fallows around mosses. May.
- G. tenebrella*, Hub.—Botanic gardens, on the lawn opposite the green houses. W. Skellam. June.
- G. tenebrosella*, F.v.R.—Only four specimens taken; they are in poor condition. July. Liscard.
- G. ligulella*, Zell.—First taken by Mr. Edmondson at New Brighton, July. It is not uncommon where *Lotus corniculatus* grows, in June and July.
- G. anthyllidella*, Hub.—Plentiful, but somewhat local, on the sand hills near the hotel, New Brighton. May, August, September.
- G. lucidella*, Steph.—In the parish pit, near Hose farm, Liscard; and in the old clay pits on the road side near Tue Brook—discovered, in the last place, by Mr. N. Cooke, 1855. July.
- G. cerealella*, Oliv.—Feeds in grain warehouses, bred from Indian corn and wheat—may be found under window sills and door heads in streets where grain is stored. July, August.
- G. nigricostella*, F.v.R.—I have only met with three specimens of this species, Bidston marsh and Hale marsh. July.
- G. næviferella*, Zell.—Church road, Stanley, and at Prenton; not abundant. Summer.
- G. Hermannella*, Fab.—Taken by Mr. Warrington behind Tranmere hall, in the stack yard. Feeds upon *Chenopodium*.
- G. pictella*, Zell.—Near the mouth of the Alt, at Hightown. August. Amongst the herbage.
- G. ericinella*, Dup.—Where heath grows. Summer.

Genus 9. PARASIA, Dup.

P. lappella, Lin.—May be found in July near Hose farm, and upon the clay banks at Egremont.

Genus 11. CHELARIA, Haw.

C. Hubnerella, Don.—Walker's lane, Tranmere, and in other mixed hedges. August.

Genus 12. ANARSIA, Zell.

A. Spartiella, Schr.—Gorse bushes above New Brighton, and in Wallasey lane. July.

Genus 16. SOPHRONIA, Hub.

S. parenthesesella, Lin.—Beat out of gorse in Jackson's wood, where the new college now stands. July.

Genus 17. PLEUROTA, Hub.

P. bicostella.—Heaths. May and June.

Genus 18. HARPELLA, Sch.

H. Geoffrella, Lin.—The specimens in my cabinet I took in the lane near the old mill dam at Garston many years ago, and have never seen any other specimens taken in this district. I have heard it asserted, that it never occurred north of London. My specimens prove the contrary. Stainton says,—“it delights to fly in the early morning, preferring sunny mornings.”

Genus 20. DASYCERA, Sta.

D. sulphurella, Fab.—Wherever there are old decayed trees or posts with the bark on. April, May.

Genus 21. ŒCOPHORA, Zell.

Œ. flavimaculella, Sta.—Where *Angelica sylvestris* grows. June, July, August.

Œ. tripuncta, Haw.—In old bramble hedges. June. Oxton.

Œ. subaquillea, Edl.—Bred from a pupa found under loose gorse bark; beat out of old gorse bushes at Jackson's wood and Bidston. June.

Œ. fuscescens, Haw.—Old gorse bushes on the top of Bidston hill. September.

Œ. pseudo spretella, Sta.—Plentiful in grain warehouses, particularly so in Golding's, North John street.

Genus 23. ENDROSIS, Hub.

E. fenestrella, Sco.—The common clothes moth.

Genus 24. BUTALIS, Treit.

B. grandipennis, Haw.—Mr. Brockholes first called my attention to some fine webs in the gorse bushes upon Bidston hill, where I had taken this species for some years. We bred the insect from the larvæ in the webs. June.

B. senescens, Sta.—Bidston hill. July. Among short grass.

FAMILY 6. GLYPHIPTERYGIDÆ.

Genus 1. ACROLEPIA, Curt.

A. granitella.—Mixed hedges, Liscard, near the Trafalgar hotel. Mr. Edmondson. Two specimens.

Genus 3. GLYPHIPTERYX, Hub.

G. fuscoviridella, Haw.—Among low herbage in damp places, on the sand hills. June.

G. Thrasonella, Scop.—Where rushes grow. June.

G. Hawarthana, Steph.—Among the cotton grass on the mosses in May. Feeds in the seed pods.

G. equitella, Scop.—Where *Sedum acre* grows, as on the old walls at Wallasey, near the Church. June.

G. Fischeriella, Zell.—In most mixed hedges in old lanes among flowers. May, June.

Genus 5. PERITTIA, Sta.

P. obscurepunctella, Sta.—I have only met with two specimens, one in Edge lane, and I have no record of the other. June.

Genus 6. TINAGMA, Dup.

T. sericiellum, Haw.—Old lanes among flowers. May.

FAMILY 7. ARGYRESTHIDÆ.

Genus 1. ARGYRESTHIA, Hub.

A. nitidella, Fab.—In most thorn hedges. June.

A. semitestacella, Curt.—Croxteth park, where the beeches grow, near the charcoal burners' hut. September.

A. spiniella, Zell.—Bidston hill, and Simonswood, on mountain ash. August.

A. albistria, Haw.—On the waste land between Hose side and Wallasey village among sloe trees. June.

A. conjugella, Zell.—Where mountain ash grows. June and July.

A. glaucinella, Zell.—A collector of insects showed me some specimens of this species he had taken in this district, but did not tell me where he took them. The most likely place to find them would be on the old oak tree, near the stile, on the foot walk between Bromborough and Eastham wood. Search low down the trunk. June and July.

A. retinella, Zell.—In birch plantations, near the mosses. July.

A. pygmaella, Hub.—Among willows, in June and July.

A. curvella, Lin.—Upon apple trees in orchards at Frankby, Bromborough, &c. June.

A. Sorbiella, Treit.—Beat from the row of mountain ash, in the last field before you get to the moss, going by Knowsley chapel road.

A. Goedartella, Lin.—Where old birches grow. July.

A. Brockeella, Hub.—Taken with *Goedartella*.

Genus 2. CEDESLIS, Sta.

C. farinatella, Zell.—Bidston hill, on the Upton road, among the young fir trees. June.

Genus 3. OCHEROSTOMA, Zell.

O. piniariella, Zell.—Where fir trees grow. Summer.

FAMILY 8. GRACILLARIDÆ.

Genus 1. GRACILLARIA, Zell.

G. Swederella, Sch.—Plentiful where oaks grow. Summer.

G. stigmatella, Fab.—May be found among the small sallows on the sand hills, in Autumn and in Spring. Comes to sugar.

G. elongella, Lin.—May be beat from the silver firs, in Croxteth park, in Winter and Spring.

G. Syringella, Fab.—Wherever lilacs grow. May.

G. phasianipennella, Hub.—I smoked a single specimen of this species out of a tuft of heath in the lane above Jackson's wood, October, 1854. Should occur among *Polygonum hydropiper*.

G. auroguttella, Step.—In the lane leading from Broad Green toll bar to Woolton, among *Hypericum*. July.

Genus 2. CORISCIMUM, Zell.

C. sulphurellum, Haw.—Boors Wood, Hale, is the only place I have met with this pretty insect in our district. August.

Genus 3. ORNIX, Zell.

O. Avellanella, Sta.—Croxteth wood and Prenton lane, where nut bushes grow. Spring and Autumn.

O. Anglicella, Sta.—Old hedges in lanes; anywhere. May, July.

O. Loganella, Sta.—Beat from mountain ash at Simonswood, in June.

O. guttea.—Bred from apple leaves collected at Bidston and Moreton. June. Larvæ feed in August.

O. Betulæ, Sta.—Young birches on the moss. May.

FAMILY 9. COLEOPHORIDÆ.

Genus 1. COLEOPHORA.

C. Fabriciella, Vill.—In a small flowery field between Bidston pleasure ground and the marsh. June.

- C. alcyonipennella*, Koll.—On the Railway bank at Olive Mount; and Mrs. Almond found it in the old lane, Clifton park, feeding upon *Centaurea nigra*.
- C. pyrrhulipennella*, Tisch.—On Bidston hill, and upon the mosses. June.
- C. albicosta*, Haw.—Among gorse at New Brighton, Bidston, &c. May and June.
- C. affirmatella*, N.S.—Expands from six to eight lines. Head and face white, antennæ whitish, annulated with dark rings, the basal joints tufted with very long whitish hair-like scales, darkest at the ends. The fore wings white, powdered with numerous fuscous scales, more thickly spread towards the apex, cilia light ashy; hind wings light ashy, with lighter cilia. Plentiful upon "*Salix caprea*" growing upon the clay banks at New Ferry and around Flaybrick hill. The pistol-like case resembles bird dung upon the leaf, and has been frequently overlooked in consequence. Larvæ, May and June; Imago in July.
- C*——?—New species. Crosby sand hills. June and July.
- C. discordella*, Zell.—Plentiful among *Lotus corniculatus* on Crosby sand hills.
- C. cæspitiella*, Zell.—Among the rushes upon Bidston hill, in June.
- C. annulatella*, Nyl.—I have met with the case of this species in Church road, Stanley, but have not yet bred it.
- C.* ——— N. S. ?—This species is allied to *nigricella*, and feeds upon birch, in May.
- C. nigricella*, Steph.—Plentiful in old thorn hedges. July.
- C. fuscadinella*, Zell.—Where alders grow, always plentiful. July.
- C. juncicolella*, Sta.—Bidston hill. July.
- C. gryphipennella*, Bouché.—Where roses grow. June.
- C. Laricella*, Hub.—Where larches grow. June.
- C. viminetella* v Heyd.—On sallows in the lane leading from Mosley hill to Allerton; also on the sweet gale on Simonswood moss. Is this the same species?
- C. lutipennella*, Zell.—Eastham wood. June.
- C. ochrea*, Haw.—Upton and Moreton. July.

FAMILY 10. ELACHISTIDÆ.

Genus 4. BATRACHEDRA, Sta.

- B. præangusta*, Haw.—Upon the trunks of the white poplars which grow on the sand hills between Crosby and Hightown station. End of June.

Genus 7. LAVERNA, Curt.

- L. propinquilla*, Sta.—Mixed hedges, Prenton. July. Very few taken.
- L. lacteella*, Steph.—Walker's lane, Tranmere, first taken by Mr. Diggles. June.

L. atra, Haw.—In mixed hedges near gardens. June and July

L. ochraceella, Curt.—Bidston marsh, among *Epilobium hirsutum*. July.

Genus 8. CHRYSOCLISTA.

C. flavicaput, Haw.—In the thorn hedges in the Botanic gardens. June.

C. Schrankella, Hub.—Where *Epilobium* grows. July.

Genus 13. ELACHISTA, Treit.

E. apicipunctella, Sta.—I took my specimens on the fallows at Simonswood moss, July, 1850. June is said to be the proper time for it. Feeds in the stems of grass.

E. albifrontella, Hub.—Abundant under hedges in sheltered places.

E. atricomella, Sta.—I have only taken one specimen. Search where *Dactylis glomerata* grows.

E. luticomella, Zell.—Bred freely from *Dactylis glomerata*, previously considered very rare. June.

E. Kilmunella, Sta.—Prenton hill and Kirkby Moss. July.

E. nigrella, Hub.—Common under hedges, in May.

E. pulchella, Haw.—Plentiful among the grass patches on the sand hills, in May and August.

E. Megerlella, Sta.—Mr. Edmondson took this species somewhere between Seacombe and Liscard.

E. cerusella, Hub.—Plentiful in wet parts of the mosses. May and August.

E. rhyncosporella, Sta.—Abounds among the cotton grass on mosses.

E. biatomella, Sta.—Bidston hill and New Brighton hill, in grassy places under gorse bushes. May and June.

E. triatomea, Haw.—With the former.

E. colletella, F.v.R.—I have two specimens, but have no record in my Journal where I took them.

E. ochreella, Sta.? *Nebulea*, Sta.?—Jackson's wood and Bidston wood. June.

E. cygnipennella, Hub.—On all waste lands.

E. Gregsoni, Sta.—On the cinder walk from Edge lane to Church road, Stanley. End of March, April.

Genus 14. TISCHERIA, Zell.

T. complanella, Hub.—Where oaks grow. June.

T. marginea, Haw.—Flaybrick hill, Patrick wood, and lanes where old brambles grow. April and May.

FAMILY 11. LITHOCOLLETIDÆ.

Genus 1. LITHOCOLLETIS, Zell.

L. quinqueguttella, Sta.—Among the small sallows on the sand hills. May and July.

- L. pomifoliella*, Zell.—Where crab trees grow in lanes. May and August.
- L.*—————?—In lanes, on thorn hedges plentiful.
- L. coryli*, V. N.—Prenton lane, among nut bushes. May.
- L. spinicolella*, Kol.—On the waste ground near Hose Side, behind New Brighton. May, August.
- L. faginella*, Mon.—Wherever you can find beech hedges. May, August.
- L. salicolella*, Sircom.—May be bred, or beat from, willows, especially *Salix caprea*. April, August.
- L. viminetorum*, Sta.—Where osiers grow. May and August.
- L. ulmifoliella*, Hub.—Croxteth park, near the charcoal burners' hut. Spring and August.
- L. spinolella*, Dup.—In the large willow bush inside the moss wood on the road side. May.
- L. quercifoliella*, F.v.R.—Where oaks grow. May, August.
- L. Messaniella*, Zell.—Aigburth road and Edge lane, in and near evergreen oaks. April, August.
- L. corylifoliella*, Haw.—Thorn hedges, around Olive Mount. May.
- L. ulicicolella*, Vaugh.—Furze bushes on the waste lands between Poultoncum-Seacombe and Wallasey. July.
- L. alnifoliella*.—In profusion in the plantations between Hightown station and Formby, on the alders. End of June.
- L. Cramerella*, Fab.—Plentiful in oak woods. April.
- L. emberizæpennella*.—Eastham and Hale woods, among honeysuckles. May.
- L. Frolichiella*, Zell.—Among the alders beyond Huyton quarry. May.
- L. Dunningiella*, Sta.—Lord Sefton's plantations at Croxteth, among the nut trees. May, and again in Autumn.
- L. Nicellii*, Zel.—Croxteth park plantations. May and August.
- L. Stettinensis*, von Nice.—I found the peculiar mine, as described to me by Mr. Wing, of this species, last July, in the alders growing near Formby.
- L. Klemannella*, Fab.—Also feeds in the same trees.
- L. tristrigella*, Haw.—Around Prescott and Upton, mixed hedges. May and August.
- L. trifasciella*, Haw.—In woods and old hedges where honeysuckle is plentiful. May, July.

FAMILY 12. LYONETIDÆ.

Genus 1. LYONETIA, Hub.

- L. Clerkella*, Lin.—Near old orchards and gardens. June.

Genus 2. PHYLLOCNISTES, Zell.

P. suffusella, Zell.—Near poplars at Club moor. End of June.

Genus 3. CEMIOSTOMA, Zell.

C. spartifoliella, Hub.—Among broom at Claughton and at Bidston. End of June.

C. Laburnella, Von Heyd.—This must be searched for where laburnums are plentiful. I took its larvæ in Cunningham's nursery, but did not breed the insect.—Makes a light green blotch on the laburnum leaves, in Autumn.

C. scitella, Zell.—This beautiful little thing may be found in Pigue lane, and elsewhere, by beating hedges, in June.

Genus 4. OPOSTEGA, Zell.

O. crepusculella, F.v.R.—My cabinet specimens were taken in the field below the long plantation at Bidston, on the wing. Evening, among long grass. July.

Genus 5. BUCCULATRIX.

B. Cratægi, Zell.—Mosley hill and Olive mount, old thorn hedges. June.

FAMILY 13. NEPTICULIDÆ.

Genus 1. NEPTICULA, Zell.

N. anomalella, Goeze.—Among roses in gardens and lanes. Spring and Autumn.

N. pygmælla, Haw.—In lanes. Evening. Spring and Autumn.

N. ruficapitella, Haw.—The lane from Bromborough to Eastham wood seems to be a favorite resort of this species, on oak trunks.

N. atricapitella, Haw.—Croxteth plantation. Spring and Autumn; on oaks.

N. floslactella, Haw.—Plentiful in June, in Prenton lane, and other places where nut trees grow, in hedges. May.

N. aurella, Fab.—Plentiful where brambles grow: in sheltered situations. All Summer.

N. pygmælla, Haw.—Pigue lane, Olive mount, in the hedges.

I am at present working at this genus, which is not in a satisfactory state, and will require some time to work out.

FAMILY 1. PTEROPHORIDÆ.

Genus PTEROPHORUS.

P. ochrodactylus, Hub.—Hale, Bromborough pool, above the mill, and on the banks of the Alt. In July and August.

P. trigonodactylus, Haw.—Waste land where coltsfoot grows. August and September.

P. acanthodactylus.—Hale marsh, particularly on the banks where *ononis arvensis* grows.

P. punctidactylus, Haw.—My specimen was taken by Mr. Nixon upon the window curtains in his house at Hale, June 21st, 1842. Jacksonwood.

P. fuscus, Retz.—Lanes near Warbrick moor. July.

P. bipunctidactylus, Haw.—Plentiful behind the New Brighton hotel. July. Evening.

P. pentadactylus, Lin.—Walker's lane, Tranmere, and other old lanes, plentiful.

In conclusion, I would call the attention of my fellow-labourers to the fact, that I took a plume, new to Britain, at Southport, in August last *P. (loewii*, Zell). This is a few miles outside our district; but as the species has never been taken between Southport and Italy and the Isle of Rhodes, it will be interesting to know if it is within our district. I suspect it feeds upon garden herbs, perhaps hyssop or rue; and has probably been overlooked.

Genus ALUCITINA.

A. polydactyla, Hub.—Plentiful in old thatch, especially near woods. Autumn and Spring. Must be beat out.

FINIS.

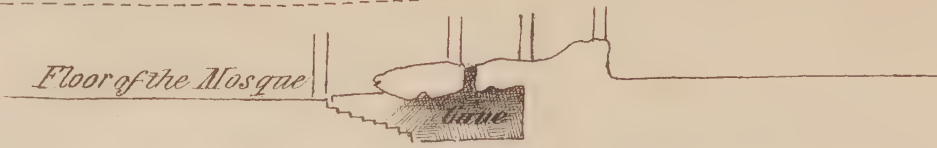
NOTE.—*Genus* HELIOTHIS.

H. armigera.—Captured by Mr. Almond at Bromborough, October 13th, 1857. The late appearance of this specimen must not be taken as a guide by those who wish to capture the species; rather let them search for it in August and September. I have known one taken in July.

PROFILE OF THE ROCK SAKHRA IN THE MOSQUE OF OMAR:
ACCORDING TO ALI BEY.



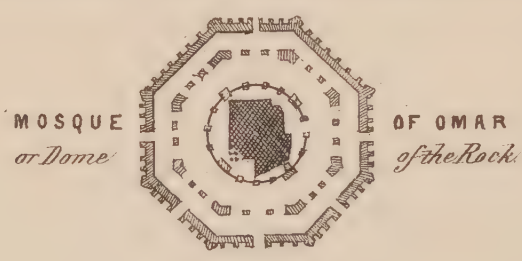
Level of El Harâm



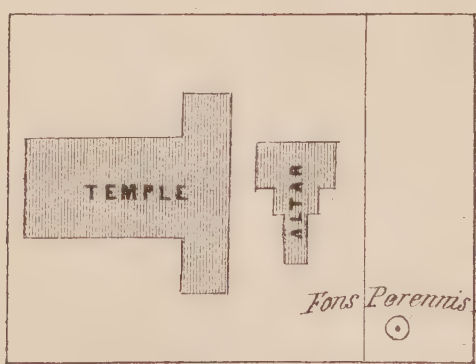
ACCORDING TO MR CATHERWOOD.

Void space at the time of the Second Temple, presumed to be a Cemetery of the Jews, and called Golgotha.

Supposed erection temp. Constantine 338.



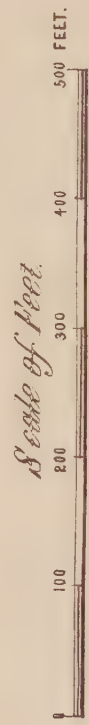
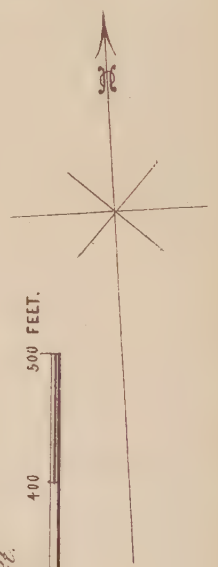
Old Wall and present boundary of El Harâm



Present Site of the Mosque, El Aksa.

Herod's Stoa Basilica.

The Watergate.



THE VALLEY OF THE KEDRON.

Ruins of old vaults, temp. Justinian

SOLOMON'S PORCH.
Old Wall still remaining.

Direction of Walls, supposed, Temple of Solomon

Direction of Walls supposed of the Temple of Solomon

WHILING PLACE OF THE JEWS

EL SAKHRA.

By Major-General the Hon. Sir Edward Cust, D.C.L., &c., President.

(READ 6TH MAY, 1858.)

Modern travellers relate a discovery which appears to be but little known, of the Sakhra, or locked-up stone in the Mosque of Omar, on the site of the ancient Temple of Jerusalem.

Mr. A. P. Stanley, in his most interesting tour to the Holy Land, alludes to the stone El Sakhra and to the fountains, which will also be seen to have some reference to the subject of our enquiry. He mentions, moreover, that Burckhardt, the celebrated Sheik Ibrahim, had entered the grotto below the stone. But Ali Bey was the first person, (in his Travels to the Holy Land,) to describe the Mosque of Omar, and to give sections and drawings of it, which had up to that time been refused to the whole Christian world during the long period of its appropriation to the religion of Mahomet.

The authorities on which we are to rely for all that is known of this stone are first, Ali Bey's Travels, published in 1807, and secondly, Ferguson's Essay, founded on the report and measurements of Mr. Catherwood, introduced into Bartlett's "Walks about Jerusalem," 1844. These two writers were enabled to visit both the rock and the chamber under it, with every detail. The first begins his relation thus:—"As no detailed description has been hitherto given of the Mussulman Temple at Jerusalem, because the Moslems are not prepared for such a task, and the Christians are not permitted to enter it, I shall now endeavour to give some idea of this magnificent monument of architecture, which ought to interest the learned, whether followers of Moses, or Jesus Christ, or Mohammed." He seems to have been a man patronised by Sir Joseph Banks in his enquiries at the two Kaabas of Mecca and Jerusalem; and what he has stated is fully corroborated, in respect to the stone and dome of the rock, by Mr. Catherwood, an artist sent out by Burwood to make drawings for a panorama of the Mosque of Omar; and the plans and sections of both agree together.

Thirdly, Curzon, in his "Visit to the Levant," relates of the Mosque—"In the centre of the garden, which stands on the site of the ancient Temple, is a platform of stone about 600 feet square, on which

“stands the octagonal building of the Mosque itself, the upper part
 “covered with green porcelain tiles, &c. The building is called the *Achsa*
 “*el Sakhra*, from its containing a piece of rock called the *Kadjr el Sakhra*,
 “or the locked-up stone, which is the principal object of veneration in the
 “place. It occupies the centre of the Mosque, and on it are shewn the
 “prints of the angel Gabriel’s fingers, who brought it from heaven ; and
 “the mark of the Prophet’s foot, and that of his camel, when he went up
 “to heaven, &c. * * * We are told that the stone *el Sakhra* fell
 “from heaven at the time when prophecy commenced at Jerusalem—that
 “it was employed as a seat by the venerable men to whom that gift was
 “communicated ; and that as long as the spirit of vaticination continued
 “to enlighten their minds, the slab remained steady for their accommoda-
 “tion, but that no sooner was the power of prophecy withdrawn, and the
 “persecuted seers compelled to flee for safety to other lands, than the stone
 “manifested the profoundest sympathy in their fate, and evinced a deter-
 “mination to accompany them in their flight ; on which Gabriel the arch-
 “angel interposed his authority, and prevented the departure of the
 “prophetical chair. He grasped it with his mighty hand, and nailed it to
 “its rocky bed by seven brass or golden nails. When any event of great
 “importance to the world takes place, one of these nails disappears ; and
 “when they are all gone, the day of judgment will come. As there are
 “only three left, the Mahomedans believe that the end of all things is not
 “far distant.”

Fourthly, Richardson thus describes the same stone :—“ But that to which
 “the Temple owes both its name and existence is a large irregular oblong
 “mass of stone, that occupies the centre of the Mosque. It is a mass of
 “compact limestone, the same as that of the rock on which the city stands,
 “and of the other mountains about Jerusalem, and if it had not been
 “called a separate stone, I should have imagined it a part of the native
 “rock that had been left unremoved, when the other parts were worked
 “down, or built up, for the foundation of the building. It rises highest
 “towards the south-west corner, and falls abruptly at the end where are the
 “prints of the prophet’s foot. It is irregular on the upper surface—
 “under it there is an apartment dug in the solid rock, which is entered by a
 “stair that opens to the south-east. Into this excavation, however, I could
 “never gain admittance, though I was four times in the Mosque : the key
 “was always wanting. I was assured by Ali Bey, who as a Mussulman
 “had visited this excavation, (and who is the first person that has brought
 “it into Christian notice,) that it is an irregular square of about 18 feet
 “in circuit and 8 feet high in the middle. The entire Mosque stands on
 “a platform elevated 12 or 14 feet above the level of the grassy court—
 “the central compartment that contains the stone is elevated about 3 feet

“above this outer floor. There are four large square columns, and three
 “small round columns between each of them, which support the dome.
 “Between these there is in one place a high square wooden box, with an
 “opening on one side of it large enough to admit the hand to feel the
 “print of Mahomet’s foot which he left there. I put in my hand and
 “touched it, and stroked my face and beard as I saw the Mussulmans do ;
 “but it is so completely covered that it cannot be seen. I also introduced
 “my hand through the posts of the wooden rail to feel as well as to see
 “the marks of the angel Gabriel’s fingers, into which I carefully put my
 “own.” The story is then related in the same words as are used by
 Curzon in the extract given already.

Both the Bible history and Josephus are silent as to the existence of any such stone.

Josephus records that before the holy place “stood the altar, 15 cubits
 “high, and equal both in length and breadth, 40 cubits. The figure it was
 “built in was a square, and it had corners like horns, and the passage up
 “to it was by an insensible acclivity. It was formed without any iron tool,
 “nor did any such iron tool so much as touch it at any time ;” and again
 he mentions, about the middle of the temple, “a square altar not made of
 “hewn stone.”

The cubit has been taken at “three hand-breadths of six inches,” or
 18 inches. Consequently, the altar was 60 feet square, and stood $22\frac{1}{2}$ feet
 high ! but what did the height measure from ? The top of the Sakhra
 would appear to be about 17 feet above the grassy court of the enclosure.

The compass of the floor of Moriah was increased by the industry
 of Solomon far beyond what it was when that great King first began
 the building there. The spot where David, by divine direction, built an
 altar, and God, by divine fire upon it, fixed the place for the altar of
 the Temple (1 Chron. xxi. 18, xxii. 1,) became the standing mark
 from whence the rest of the Temple was builded. This stood upon
 an immense substructure from the valley-side north, south and west,
 carried all round to the extent of one furlong square. In 2 Chron. iv. it is
 stated that Solomon made an altar 20 cubits square and 10 cubits high,
 or 30 feet square by 15 feet high ; but whether it was of the fashion of
 that of Moses, than which it was four times as large ; whether the middle
 space was hollow, or it had a grated hearth, like his ; or what was the
 manner of ascending to it, is not certainly known.

The sacrifices of Solomon are exceeding wonderful : 700 oxen and 7000

sheep, (2 Chron. xv. 2,) and in 1 Kings viii. 63, "Solomon offered a sacrifice of peace offerings which he offered to the Lord, 22,000 oxen and 120,000 sheep." It may be respectfully enquired, how could this have been done on an altar of any size, even though the sacrifice itself may have continued for the longest period of such solemnities, or fourteen days?

But it is said that Solomon hallowed the middle of the court, "because the brazen altar that was before the Lord was too little to receive them;" and although some doubts exist as to the meaning of this phrase, "the middle of the court," it is understood that in consideration of the vast and infinite number of sacrifices to be slain and offered, he hallowed the court all about the altar for the purpose. Now, the height of the altar is given as ten cubits, or fifteen feet. Obviously, it was impossible for the priests, when the altar was so high, to stand on the ground and serve upon it; and they were expressly prohibited (Exod. xx. 26,) from going up to the altar by steps; therefore there was a gentle rising called *Kelesh*, which may be Englished, "the rise of the altar."

A right understanding of the form of the altar, and of this rising up to it, is not very easy to arrive at. Ezekiel the prophet records respecting its place, "upon the top of the mountain the whole limit thereof round about shall be most holy." On this rocky top we may then suppose that there was placed, on a low brass settle forty-seven feet square, and not above a cubit in height, an altar about eighteen feet square, and a few feet high, having a horn at each of the four corners. Between the settle and the altar the priests would have been able to move to sprinkle the blood of the sacrifices; at the south-west point of the stone were two holes near to the angle's point, one upon the west side and one upon the south, into which the blood that was poured upon the foundation did run, and so into a sink or common sewer under ground, which emptied itself into the valley of Kedron; and we shall find that one of the accounts of the Sakhra states that it is pierced by a considerable perforation at the south-east angle, communicating quite through to the cavern beneath, which might have been a natural conduit to carry off the blood and offal, which from thence was brought down through a vertical channel now covered with a marble slab and the golden nails mentioned by Curzon.

It may be also mentioned that the mouth of the ancient sewer has been found recently on the hill-side above the fountain of the Virgin; and this subterranean passage has been identified as the canal mentioned by

Benjamin of Tudela as the termination of the drain of the great altar where the sacrifices were slaughtered in ancient times. It was through this passage that the *Fellardin* are said to have effected their entrance into the city under Ibrahim Pacha, emerging near the west wall of El Haràm.

Thus, having stated all that seems to be attainable on the subject of the stone Sakhra and the altar of the Temple, we may perhaps arrive at these conclusions:—

1. A block of calcareous stone, sixty feet square, and several feet in thickness, cannot have been conveyed thither in one rough, unhewn mass by any mechanical contrivance known to the Jews, or any other people.
2. The Sakhra must therefore have always been on the spot where it is now to be seen.
3. The mountain Moriah was certainly the same whereon Abraham offered his son Isaac, and where the temple was afterwards built by Solomon.
4. The stone Sakhra must therefore have formed part of Moriah, and must have been in the precincts of the Temple.
5. The place of the threshing floor of Araunah, the Jebusite, was a property purchased by David on some part of Moriah; and “David built there an altar unto the Lord, and offered burnt offerings and peace-offerings, and called upon the Lord; and He answered him from heaven by fire upon the altar of burnt offering.” (1 Chron. xxi., 26.) “Then David said, this is the house of the Lord God, and *this is the altar of the burnt offering for Israel.*”
6. The brazen altar made by Solomon “was not able to receive the burnt offerings, &c.” “And he hallowed the middle of the Court, and there he offered burnt offerings.” The space here indicated may have comprised the “insensible acclivity” mentioned by Josephus.
7. Solomon’s altar was certainly removed from its place by King Ahaz, and is never mentioned in the history of the Second Temple.
8. The stone Sakhra may therefore be deemed the natural summit of one of the heights of Moriah, and to have been of itself an altar on

which the offerings were laid and offered up by the priests (an altar "formed without any iron tool"—"a square altar not made of hewn stone,") sometimes, however, with the addition of a brazen altar or brazier placed upon it.

9. That the cave below was the receptacle into which all the blood and offal and washings and cleansings and rakings and ashes were conveyed by means of the natural holes now existing, which have been objects of superstitious veneration to the infidels; and, the surface of the rock being uneven, there would have been a natural and constant drain into this receptacle, which had a connection of some kind, still existing, with the valley of Jehosaphat.
10. The rock Sakhra may be therefore regarded as God's own altar, on which the sacrifices of the chosen people were offered, from the first existence of the Temple, and where, in all probability, they continued to be offered till the end.
11. All the types of the great sacrifice were therefore offered continually on the stone Sakhra.
12. I find in "Williams's Holy City," that Professor Willis had arrived at the same conclusion; and had concluded also that the excavated chamber below it was the cesspool of the great altar, and the entrance to the canal through which the blood of the victims was carried off to the brook; he mentions, moreover, as a curious coincidence, that the Middoth places the entrance to this canal at the south-east horn of the altar, which is identically the same, according to the authority of all who have seen the spot, in which the entrance to the cave is found. He adds, "I cannot doubt but that the pierced rock, venerated by the Jews and mentioned by the Bordeaux Pilgrim, is the same with the Sakhra of the Moslems, and that it marks the position, *not* of the Holy of Holies, as the later Christian, Jewish, and Moslem authors profess; but, as an earlier Christian tradition consistently maintains, of the brazen altar before the porch." The Bordeaux Pilgrim, writing A.D. 333, saw two equestrian statues of Hadrian on the site of the Temple, and "*non longe de statuis, lapis pertusus, ad quem veniunt Judæi singulis annis, et unguent eum.*" St. Jerome, writing circa, A.D. 400, states that the statue stood "*in ipso sancto sanctorum loco.*"

But, quitting this part of the subject as pretty conclusive on the identity of the altar of sacrifice and the Sakhra, we must refer to what is known of the fountains.

On this hill two natural objects still remain, each of the greatest interest. High in the centre of the platform rises the same sacred rock, and a living spring of water proceeds from beneath the mighty vaults on which the platform rests.

Richardson mentions two fountains where "they washed their heads and tasted of the water," of one of which he says, "there is a beautiful fountain called the Orange fountain, from a clump of orange trees which grow near it." Both have some connection with the pool of Siloam, which lies south of the city outside the Watergate.

It was not a little water that was used and spent at the Temple for filling the lavers, boiling the offerings, washing the sacrifices and the court itself, filling the baths of the priests, &c. It was not a small supply that was sufficient for all these purposes, and yet the Temple never wanted, but always had water in great abundance. "There was a constant supply," relates an eye-witness, "as if there had sprung up an abundant fountain underneath. There were wonderful and inexpressible receptacles underground, as appeared five furlongs' space about the Temple, each one of which had divers pipes by which waters came in on every side—all these were of lead underground and much earth laid upon them. And there were many vents on the pavement, not to be seen at all but by those that served, so that in a trice, and easily, all the blood of the sacrifices could be washed away though it were ever so much. And I will tell you how I came to know of these underground receptacles:—they brought me out more than four furlongs' space out of the city, and one of them bade me stoop down at a certain place and listen what a noise the meeting of the waters made." This water is supposed to have been drawn from a spring-head which was called the fountain Elam, or from the great pools of Solomon, a short distance from Jerusalem.

Whatever difficulties have arisen about other matters, there can be no question that the mount on which the Mosque of Omar stands, has, from the time of David and Solomon, been regarded as the most sacred ground of Jerusalem.

The rock is one of the most venerated spots of Mussulman devotion—

the platform is called El Haràm, which signifies a Temple or place consecrated to the peculiar presence of the Divinity: the profane and the infidel are alike forbidden to enter it. The Moslem acknowledges but one other spot of equal sanctity: both are called El Haràm; the one is at Jerusalem, the other at Mecca. No Mussulman Governor, though he may give permission *to enter a mosque*, would dare allow an infidel to pass into the Kaabas at Mecca and Jerusalem—such a permission would be looked upon as a horrid sacrilege; it would not be respected by the people, and the intruder would become the victim of his imprudent boldness.

What can be the reason of all this sanctity in the eyes of the Mussulman? The early Christians regarded the Temple at Jerusalem with very different feelings, and used every effort to defile it. The Romans polluted it with a Temple dedicated to Venus; and it was not till A.D. 348–368, that any one gave it veneration. Then Constantine is said to have erected the Church over The Holy Sepulchre. For centuries it has been supposed that this is the church now called by the name of Calvary; but Dr. Clarke first, and Prof. Robinson since, have denounced the situation of the present “Church of the Holy Sepulchre” as certainly not upon the site “without the walls,” which is a necessary condition to its being the Calvary of Scripture. Mr. James Ferguson, an architect,—induced to enter into the discussion by the statement and the plans and sections of Mr. Catherwood, who, by a curious accident, was enabled to make them by scale on the spot,—published his Essay in 1847, to shew two distinct things:

First, That by the measurements and details given of the second Temple by Josephus, it only stood on a small portion of the site of the Great Temple of Solomon, and that accordingly the stone Sakhra was wholly left out of the enclosure.

Secondly, That the Sakhra, thus “without the gate,” was the true Sepulchre of Christ; and that, taking an architectural view of the Mosque which covers it, it is clearly no oriental building at all, but a temple or tomb of the date of the Roman Empire; and it is, in his belief, the actual building of Constantine, over what he also considered to be “the Holy Sepulchre.”

In entering into the controversy, I must at once repudiate the idea, that

the vaulted cave under the Sakhra, which I believe to be the *Cloacum Maximum* of Solomon's altar, is "the new sepulchre in the garden, near "which Jesus was crucified, wherein was never man laid," (St. John xix, 41), but I am induced to avail myself of Mr. Ferguson's researches and conclusion to prove that the Sakhra is the spot on which the cross of Jesus Christ was raised, and on which expiation was made by his blood for the sins of the whole world—the self-same spot on which all former types of the atonement had been offered up.

There has never been any doubt raised that our blessed Lord, the great Antitype of all these sacrifices, "suffered without the gate," upon Mount Calvary, the site of which must still be considered uncertain. Under any circumstances, it was not more than a stone's throw to the westward of the Sakhra, but the proofs that type and antitype were sacrificed on the self same spot on which Isaac was offered, and on which the altar was hallowed by fire from heaven, remain to be established. When the Caliph Omar took Jerusalem, the spot had been abandoned by the Christians; but an Arabian historian relates that the Caliph applied to the Patriarch to learn what would be the most proper place on which to build a mosque, and he was conducted to what the Patriarch considered the ruins of Solomon's Temple. This as well as the other supposed sites of the events that had happened at Jerusalem, has been fixed by the Empress Helena on very insufficient evidence. Dr. Clarke supposes that an accidental fissure in the rock led the Empress to fix on the spot, now called Calvary, as the site of the crucifixion. The other selections were quite as vague; and there is nothing to determine even that of the Temple but the vast substructures and the remains of the wall upon the valley of the Kedron, which appear to indicate the general locality with some precision. Josephus, however, states the circumference of the city to have been thirty-three furlongs, or little more than four miles, which is nearly twice that of the modern town, so that what precise portion was the Temple or what the city cannot be positively ascertained. Certainly the silence of Hebrew history as to the existence of the stone Sakhra, if it really is the summit of the original Mount Moriah, and "the place of the threshing floor on which the fire of heaven fell," is very remarkable; while its recent discovery upon the site of the Temple, and its sanctity in the estimation of the Mahomedans, awaken in the Christian mind a desire to learn its true history. Whatever may be the papal fables as to

the Holy places, here is one unchanged natural feature of Jerusalem as yet unaccounted for.

According to some persons, there had been three Temples built in succession at Jerusalem; the first by David and Solomon, the second by Zerubbabel, and the third by Herod: but the Jewish scriptures acknowledge only two; and it is generally admitted that Herod's Temple, which took forty-five years to carry out, was merely an extension or beautifying of the then existing Temple. Now we know Cyrus sent away the children of the captivity with every material aid, to rebuild the city and Temple. But seventy years were gone since Nebuchadnezzar had swept his besom over the place; and, in addition to the ravages of the conqueror, "*tempus edax rerum*" must have made the task of a rebuilding no easy one. The work, though cheerfully begun, went on but slowly; so that it was twenty years before the new Temple was dedicated. Now whereas that of Solomon was 2500 feet square, the dimensions of the second Temple, as recorded by Josephus, did not exceed 600 feet. The present site of El Haràm is an irregular square, 1520 by 927 feet. It is well known, however, that both structures had been rectangular, because all the ancient Temples are found to have been so. In the Haràm the south-east angle alone is a rectangle. Mr. Ferguson believes that the one rectangular wall still existing was common to all the structures that have existed on Mount Moriah; we may not unreasonably conclude, therefore, that, when the children of the captivity returned and contemplated the vast ruin which had befallen the city and Temple, they would readily resolve to avail themselves of all the facilities that might be offered by existing remains to re-establish their worship, not more solicitous as to the precise localities of the former Temple than they shewed themselves to be regarding its extent. At the south-eastern angle they may have found reparable remains; and, within the dimensions to which they appear to have limited themselves, a living spring of water existed, an incident as essential for the sacrifice of their worship, as the fire, no longer celestial, that consumed the victims; this, therefore, may have induced them to place the sacrificial altar where they did, and not in the old locality.

The altar is but slightly mentioned after the dedication of the second Temple, and the sacrifices were probably never very large. It was plundered and wretchedly profaned by Antiochus Epiphanes, who caused

the public worship in it to cease, which it did until restored by Judas Maccabæus, when the altar was dedicated anew ; and I am not aware that in the New Testament it is ever recorded that our Lord, though he did attend the feast of this dedication and the stated festivals, ever attended the sacrifices of the altar, though it is of course very reasonable to suppose he did so. Josephus merely records of the altar of burnt offering, that at the destruction of the Temple by Titus, an immense number of dead were found round about it.

From Constantine's time to the period when the Caliph Omar took possession of Jerusalem, which was in A.D. 636, nothing is recorded of the topography of the Temple. The Moslems remained in possession of all the Holy Places until 1099, when the Crusaders took the place by storm, and held it for 88 years until A.D. 1187. The Egyptian Sultan then became master of Jerusalem, and from that period, nearly seven centuries ago, the precincts of the Temple have been jealously guarded by the Mussulman power ; thus the stone "Sakhra" remained concealed from every Christian eye, and almost from Christian knowledge, till the plans and descriptions of Ali Bey and Mr. Catherwood were given to our literature.

The site of the Golgotha of scripture is of course material to the conclusion it is my object to establish. The inference deduced by Mr. Ferguson is that the portion of Solomon's Temple *not* occupied by the second Temple would not have been profaned by dwelling-houses ; that consequently there was every probability that it would become a cemetery of the Jews,—"the place of a skull ;" and, being a void and desecrated spot, might have been selected, with great propriety, as a place for the execution of malefactors.

It is stated that the roof of the cave under the stone Sakhra is a natural irregular vault ; and that, exactly in the middle of the room, there is an aperture, almost cylindrical, through the whole thickness of the roof, about three feet in diameter. Now, if it be granted that El Sakhra is the "unhewn stone" that formed the sacrificial stone and altar of Solomon, there is reason to believe that the aperture always existed in it ; for it has been shewn that the blood and offal of the sacrifices were thus drained into the pool, and therefore this remarkable "aperture" is as old as the first Temple.

Thus, if my reasoning has been followed up, we shall find that the stone, rejected from the second Temple, was existing in the days of our Saviour in the very "Golgotha" of the New Testament; and here accordingly we discover a spot on which the cross of Christ could have been fixed by means of wedges—the "thieves on the right and left" being "on crosses away from the stone on either side," removed about fifteen feet apart. Accordingly, the position would be established :

That, by the forecast and guidance of the Almighty, the self-same silent witness—the natural rock and summit of Moriah—testifies to the offering up of Isaac—to the place of the threshing floor of Araunah the Jebusite—to the altar of sacrifice of David and Solomon—and the precious expiation of Christ upon the Cross.

If it be enquired, how should such a witness not be recognised by the Old Testament, or the New, or by Josephus? I can only reply that, "as no one knoweth of the grave of Moses to this day," so it may be concluded that the wisdom of God, who foresaw the puerilities, which are daily evidenced to our own eyes by the superstitions in an imaginary Calvary, mercifully hid the stone from the generations of both Jews and Christians till the fulness of time; but now we know that it exists, and must of necessity have existed all the while. And, the fact of its existence being at length established, it is hoped that it may be made a subject of enquiry, not to serve any religious or ecclesiastical purpose, but as we would investigate the uses of the Pyramids or Stonehenge. We may not irreverently enquire what this rock can have been that rises in the midst of the courts of the Temple at Jerusalem—a rough unseemly excrescence that successive ages of mighty sovereigns have spared, and which has been kept out of Christian sight so long by the superstitious agency of the Moslem. It must have to fulfil some mighty history in the very holy place where it is found.

ON THE FLORA OF PRESTON AND ITS NEIGHBOURHOOD.

By Mr. Charles Joseph Ashfield.

(READ 21ST JANUARY, 1858.)

- Salicornia herbacea*, Linn.—Ashton marsh. Sea shore above Southport.
- Hippuris vulgaris*, Linn.—Plentifully in ditches between Rufford and Martin mere.
- Callitriche verna*, Linn.—Brook between the tram-road and Walton hall gardens, and in many other similar places about Preston.
- Ligustrum vulgare*, Linn.—By the side of the footpath by the Larches at Ashton, and in many other places about Preston.
- Fraxinus excelsior*, Linn.—Frequent in woods and hedges.
- Veronica serpyllifolia*, Linn.—In Walton hall gardens, by Rufford park wall, and plentifully in clover fields about Rufford. Frequent in pastures between the tram-road and Walton hall gardens.
- *Beccabunga*, Linn.—Very common in brooks and ditches throughout the district.
- *anagallis*, Linn.—In brooks and ditches in many places, but not so frequent as the last. Ditches between Kirkham and Freckleton, plentifully.
- *scutellata*, Linn.—Brook between the tram-road and Walton hall gardens. Near Nicky Nook, Garstang; on Ribbleton moor.
- *Chamædrys*, Linn.—Common on dry hedge banks throughout the district.
- *officinalis*, Linn.—Occasionally in similar situations to the last; Ribbleton moor.
- *montana*, Linn.—Woods about Redscar very plentifully; in the grounds belonging to Walton hall, abundantly.
- *agrestis*, Linn.—Not uncommon in cultivated ground. In Walton hall gardens.
- *polita*, Fries.—On a bank at Greave's Town, Ashton.
- *arvensis*, Linn.—Frequent on walls and dry banks, and in fields. In Walton hall gardens.
- *hederifolia*, Linn.—On a wall by the side of the road leading by Whinfield house to the Larches at Ashton. Not uncommon in similar places. Very abundant in dry corn fields about Rufford.

Pinguicula vulgaris, Linn.—Common in wet places on Pendle hill.

Utricularia vulgaris, Linn.—Brooks and ditches at Martin mere. I have been informed that this plant has been found in the canal near Preston, and in pits near Kirkham.

—— *minor*, Linn.—I have seen a dried specimen of this plant which was found on Leyland moss.

Lycopus Europæus, Linn.—Frequent by the sides of brooks and pits.

Circæa lutetiana, Linn.—Plentifully in Penwortham churchyard. Ditch by the side of the footpath leading from the tram-road to Walton hall gardens. In several shady lanes and woods about Preston.

Lemna trisulca, Linn.—Pit beyond the Tunbrook wood, and in similar situations occasionally. Pit near the cemetery.

—— *minor*, Linn.—Abundantly on the surface of ditches and pools.

—— *gibba*, Linn.—Ditches and pools on Ribbleton moor.

Anthoxanthum odoratum, Linn.—Plentifully in meadows and pastures.

Valeriana officinalis, Linn.—Frequently in marshy places and ditch sides. Abundantly in several places between the tram-road and Walton.

—— *dioica*, Linn.—Meadows near Cottam mill; near Nicky Nook.

Fedia olitoria, Vahl.—A weed in Walton hall gardens.

Iris Pseud-acorus, Linn.—Very frequent in marshy places. Abundantly near the footpath below Brockholes wood.

Scirpus cæspitosus, Sm.—On Longridge fell.

—— *lacustris*, Linn.—Not uncommon by the sides of rivers and pools. Abundant and fine by the side of Marton mere, near Blackpool.

—— *maritimus*, Linn.—River side at Naze point, and in many localities between that place and Lytham. Ashton marsh, near Whinfield house.

—— *sylvaticus*, Linn.—I am informed that this plant grows near Sion hill, Ribbleton.

Eleocharis palustris, Br.—Common on marshy ground and by pools.

Eriophorum vaginatum, Linn.—Common on Pendle hill; plentifully on the moors between Black Coppice and Rivington Pike.

—— *angustifolium*, Roth.—Common on Pendle hill; Ribbleton moor.

Montia fontana, Linn.—Spring by the side of the road from Cottam hall to the Chapel, and in many similar places about Preston.

Dipsacus sylvestris, Linn.—Between Greave's Town and the marsh.

Scabiosa succisa, Linn.—Abundant in many places about Longridge on the fell sides.

Knautia arvensis, Coult.—Common in the borders of corn-fields.

Sherardia arvensis, Linn.—Frequent in corn-fields; common in fields near Stydd church.

- Asperula odorata*, Linn.—Melling's wood, and in several other woods about Preston.
- Galium uliginosum*, Linn.—Frequent by the sides of brooks and pits.
- *cruciatum*, Linn.—Frequent by hedges and road sides.
- *palustre*, Linn.—Frequent in marshy ground and by brooks and pits.
- *saxatile*, Linn.—On Ribbleton moor; in several places about Clitheroe. Dry banks and walls about Rufford towards Martin mere.
- *Mollugo*, Linn.—Occasionally in hedges near Beacon fell.
- *verum*, Linn.—Brook side at Fulwood. Not unfrequently in pastures about Preston; banks between Naze Point and Lytham, plentifully.
- *aparine*, Linn.—Common in most hedges in the district.
- Plantago major*, Linn.—Common in pastures and by road sides.
- *maritima*, Linn.—Frequent in Lea marsh and in similar situations.
- *media*, Linn.—In several places between Clitheroe and Pendle hill; not uncommon in fields about Preston.
- *lanceolata*, Linn.—Common by road sides and in pastures throughout the district.
- *Coronopus*, Linn.—Plentiful in dry places on Ashton marsh.
- Sanguisorba officinalis*, Linn.—Very common in some of the fields between Walton flats and the tram-road; also in fields at the back of the Bridge inn, Penwortham.
- Cornus sanguinea*, Linn.—Frequent in hedges about Elston and Fishwick, and various other places.
- Parietaria officinalis*, Linn.—Abundantly on Clitheroe castle.
- Alchemilla vulgaris*, Linn.—Not uncommon in pastures and by the side of brooks generally in the district, and abundant in some places. Plentiful in one of the fields between the tram-road and Walton flats.
- *arvensis*, Sm.—Frequent in the borders of corn-fields. A common weed in some gardens.
- Ilex Aquifolium*, Linn.—Not uncommon in hedges and bushy places about Clitheroe and Longridge, apparently natural.
- Potamogeton natans*, Linn.—Frequent in pits.
- *perfoliatus*, Linn.—In the canal above Preston.
- *rufescens*, Schrad.—In several pits near the cemetery.
- *densus*, Linn.—Frequent in the canal above Preston. Ditch by the side of the tram-road.
- *crispus*, Linn.—Canal near Preston.
- *pusillus*, Linn.—I am told that this plant grows on Ashton marsh.
- Sagina procumbens*, Linn.—Frequent on walls and in dry gravelly places.

Sagina apetala, Linn.—In similar places to the last.

Myosotis palustris, “Kiphoff.”—Very frequent in marshy places. Brook between the tram-road and Walton.

—— *collina*, Hoffm.—I am informed that this plant is to be found among the sand hills at Lytham.

—— *cæspitosa*, Schultz.—Frequent in similar situations to *Myosotis palustris*.

—— *arvensis*, Hoffm.—Frequent in cultivated ground.

—— *sylvatica*, Hoffm.—Woods about Redscar.

—— *versicolor*, Lehm.—By the side of the Dow brook, below the camp at Kirkham.

Anchusa sempervirens, Linn.—At Rufford near the inn by the side of the road leading to the park, but perhaps not truly wild; also at Ribblesdale, but doubtfully wild.

Cynoglossum officinale, Linn.—Very abundant on most of the sandhills between Lytham and Blackpool.

Symphytum officinale, Linn.—Ditch near Penwortham turnpike, and occasionally by the sides of brooks and ditches near Preston. On the quaiting ground at the public house by the North Union Railway bridge, Preston.

Lycopsis arvensis, Linn.—Occasionally in corn-fields, by road sides, and on rubbish heaps. On the beach at Lytham.

Primula vulgaris, Huds.—Very common in thickets, hedges and banks throughout the district.

—— *elatior*, With.—In the Tunbrook wood occasionally, and in pastures in the neighbourhood. In pastures near Greave's Town, Ashton.

—— *veris*, Linn.—Meadows and pastures. Pastures at the back of the Bridge inn, Penwortham, abundantly.

—— *farinosa*, Linn.—I am informed that this plant grows on Pendle hill, in similar places to the *Pinguicula vulgaris*.

Menyanthes trifoliata, Linn.—Very abundant in pools on Ribblesdale moor, and in many similar places about Preston.

Hottonia palustris, Linn.—Ditches about Rufford towards Martin mere. I am told that it is also to be found in ditches about Lytham.

Lysimachia vulgaris, Linn.—By the side of the brook between the tram-road and Walton. By the side of Penwortham lodge.

—— *Nemorum*, Linn.—Frequent in woods in the neighbourhood. Woods about Redscar abundantly.

—— *Nummularia*, Linn.—Occasionally in wet meadows, especially along open drains and trenches.

Anagallis arvensis, Linn.—Frequent in the borders of corn-fields and in gardens. Abundant in corn-fields between Hesketh bank and Crossons.

Anagallis tenella, Linn.—Plentifully in marshy places between Lytham and the lighthouse. Wet hedge bank by the side of the road between Ormskirk and Halsall. About Nicky Nook abundantly.

Convolvulus sepium, Linn.—Plentifully in the hedge on the north side of the Ribble at Preston.

—— *arvensis*, Linn.—Borders of corn-fields and on dry banks.

—— *Soldanella*, Linn.—On the sea shore about a mile and a half from Blackpool towards Lytham.

Campanula rotundifolia, Linn.—Frequent on hedge banks and in dry pastures in every direction.

—— *latifolia*, Linn.—Ditch between the tram-road and the East Lancashire railway viaduct. Ditch by the side of the footpath leading from Penwortham bridge to Penwortham church, and several other similar places near Preston. In several places near the road from Longridge to Chipping. Holland wood, Walton-le-dale very abundant.

—— *hederacea*, Linn.—I am informed that this plant grows at Nicky Nook near Garstang.

Jasione montana, Linn.—In several places about Whittle, particularly by the canal side near Whittle springs.

Viola odorata, Linn.—Hedge bank near Roach bridge, north side of the Darwen. It is said to grow at Fishwick, and also on a hedge bank on the Wood Plumpton road.

—— *canina*, Linn.—Common on hedge banks, and in pastures and waste land throughout the district.

—— *palustris*, Linn.—Ribbleton moor plentifully. Wood at Nicky Nook. Marshy ground near Pickering castle, Whittle, abundantly.

—— *tricolor*, Linn.—Fields between Hesketh bank and Crossons. Frequent about Rufford.

Hyoscyamus niger, Linn.—By the side of the footpath leading from Hesketh bank to Crossons.

Solanum dulcamara, Linn.—In hedges occasionally, near Whittle springs. In many places near Preston.

Erythraea Centaurium, Pers.—In great abundance near the guide's house below Freckleton; also between Lytham and the lighthouse, and in similar places above Southport.

—— *littoralis*, Hook.—Among the sandhills above Southport.

Samolus Valerandi, Linn.—Plentifully between Lytham and the lighthouse Road-side between Ormskirk and Halsall.

Lonicera Periclymenum, Linn.—Abundantly in hedges between Roach bridge and the road to Whalley. In hedges in many places near Preston.

Euonymus Europæus, Linn.—Shrubbery at Walton hall, perhaps not truly wild.

- Ribes rubrum*, Linn.—Occasionally by the side of brooks. Salwick brook, near Cottam mill, and in several hedges in the neighbourhood.
- *nigrum*, Linn.—By the side of Salwick brook, near Cottam mill.
- *alpinum*, Linn.—Hedge on the right-hand side of the road from Preston to Wood Plumptre, about a mile from the turning out of the Ashton road. Hedge on the right-hand side of the road from Longridge to Chipping.
- *Grossularia*, Linn.—Occasionally in hedges, but not very common. Lane on the right-hand side of the road between the Sumpter's house and Tardy gate. Between Walton wood and the road.
- Hedera Helix*, Linn.—Common in woods and on old trees in hedge rows everywhere in the district.
- Glaux maritima*, Linn.—On the sea-coast at Lytham and Blackpool abundantly.
- Vinca minor*, Linn.—Abundantly on a bank in a wood near the Larches, between the footpath and Ashton marsh, but perhaps not truly wild.
- Chenopodium Bonus Henricus*, Linn.—Frequent in waste ground and by road sides.
- *maritimum*, Linn.—I am told that this plant is to be found near Lytham.
- *intermedium*, Koch.—Common in waste ground and on dunghills.
- Salsola Kali*, Linn.—On the sandy sea shore about Lytham and Southport.
- Ulmus campestris*, Linn.—Occasionally in woods.
- *montana*, Bauh.—Occasionally in woods near Whitewell.
- *glabra*, Mill.—In woods.
- Gentiana Pneumonanthe*, Linn.—Ribblesdale moor abundantly.
- *amarella*, Linn.—Abundantly on hills about Rawtenstall.
- *campestris*, Linn.—Plentifully between Lytham and the lighthouse.
- Eringium maritimum*, Linn.—Sea shore at Lytham.
- Hydrocotyle vulgaris*, Linn.—In swampy places not unfrequently. Plentifully in a marshy field near the river Loud, between Longridge and Chipping. Ribblesdale moor abundantly.
- Sanicula Europæa*, Linn.—Frequently in woods near Preston. Brockholes wood. Wood between the tram-road and Walton.
- Caucalis latifolia*, Linn.—A solitary specimen of this was found during the present year in the yard at the back of the office of the Deputy Clerks of the Peace in Preston.
- Torilis anthriscus*, Gærtn.—Not unfrequently in hedges and waste ground.
- Anthriscus vulgaris*, Pers.—By the road-side near the barracks at Fulwood.
- Scandix Pecten*, Linn.—In corn-fields occasionally.
- Myrrhis odorata*, Scop.—In several places by the side of the brook near

Chipping towards Whitewell. Orchard at the back of the Talbot Arms inn, Chipping. In many places near the lead mine brook below Rivington pike.

Chærophyllum sylvestre, Linn.—Very common in waste places and pastures.

Daucus carota, Linn.—Brook-side at Fulwood. In many places near the Naze point and Lytham. Field between the tram-road and Walton.

Bunium flexuosum, With.—On hedge banks and in dry pastures occasionally. Abundantly in a wood between the tram-road and Walton hall.

Sium nodiflorum, Linn.—In brooks and ditches not unfrequently. Ditches near the cemetery.

—— *angustifolium*, Linn.—Pit between Kirkham and Little Marton.

Sison Amomum, Linn.—In hedges occasionally. By the side of the tram-road.

Æthusa Cynapium, Linn.—Lane from Avenham to Walton. Generally in gardens and cultivated ground. About Rufford.

Conium maculatum, Linn.—Frequent in hedges and waste ground.

Œnanthe fistulosa, Linn.—Not unfrequently in pools and ditches. Very common in ditches about Martin mere. Pit by the side of tram-road.

—— *Phellandrium*, Linn.—Ditches about Martin mere.

—— *pimpinelloides*, Linn.—Marshes between the Naze point and Lytham abundantly.

Smyrnum Olusatrum, Linn.—I am informed that this plant grows between Warton and Lytham.

Apium graveolens, Linn.—Occasionally in ditches and marshy places. Near Preston cemetery. Very abundant in many places between Rufford and Martin mere.

Ægopodium Podagraria, Linn.—Abundantly by the side of the lane leading from near Walton bridge towards Melling's wood. Also by the side of the footpath near the Larches at Ashton.

Pimpinella Saxifraga, Linn.—Frequent in dry pastures and by road sides.

—— *magna*, Linn.—Not uncommon about Preston. Abundantly among the old lime works near Clitheroe.

Pastinaca sativa, Linn.—Borders of fields near Leyland and Euxton.

Heracleum Sphondylium, Linn.—Borders of fields in the district generally.

Viburnum Opulus, Linn.—Woods on each side of the toll-bridge on the Blackburn new road.

Sambucus nigra, Linn.—Frequent in woods and hedges.

Parnassia palustris, Linn.—Abundantly between Lytham and the lighthouse. Also in similar spots north of Southport.

Statice Armeria, Linn.—In sandy ground in Ashton marsh abundantly.

—— *Limonium*, Linn.—Sea shore, Knot end, opposite to Fleetwood.

Linum catharticum, Linn.—Dry pastures. Frequently about Clitheroe, particularly towards Pendle hill. Also about the Naze point.

Drosera rotundifolia, Linn.—Ribblesdale moor. Leyland and Farrington mosses. Pilling moss.

—— *longifolia*, Linn.—Leyland moss. Pilling moss.

—— *Anglica*, Huds.—Leyland moss. Pilling moss.

Galanthus nivalis, Linn.—Hedge bank near the fourth mile stone from Preston, about two fields to the right of the Lancaster road.

Narcissus Pseudo-Narcissus, Linn.—In several hedges and fields by the side of the road about a mile beyond the church at Walton-le-dale.

Allium ursinum, Linn.—Very abundantly in the wood between the tram-road and Walton hall. Also in many other places about Preston.

Ornithogalum umbellatum, Linn.—In a thicket near Cottam hall, by the side of the footpath leading into the Wood Plumpton road.

Gagea lutea, Ker.—On both sides of the lane leading from the Blackburn road to Cuerdale hall. I have been informed by a person that he has found this plant near Accrington.

Hyacinthus non-scriptus, Linn.—Woods near Walton, and in many other places about Preston in great abundance.

Asparagus officinalis, Linn.—A few plants of this species are to be found each year among the sand hills at Lytham, and I understand were found there many years ago; but probably they are not truly wild.

Narthecium Ossifragum, Huds.—Plentiful in wet places on Longridge fell, and in many other similar places about Preston.

Acorus Calamus, Linn.—In a pit by the footpath to the cemetery, where it is this year (1858) flowering in considerable quantities. Pit on the Moor hall estate. By the side of the tram-road.

Juncus glaucus, Sibth.—Frequent in wet pastures.

—— *effusus*, Linn.—Frequent in wet pastures.

—— *conglomeratus*, Linn.—Common in wet pastures.

—— *squarrosus*, Linn.—Common on wet heathy ground.

—— *compressus*, Jacq.—Common in wet pastures. Marshes between the Naze point and Lytham.

—— *bufonius*, Linn.—Common in marshy fields.

—— *uliginosus*, Sibth.—Common in wet swampy meadows.

—— *acutiflorus*, Ehrt.—Common in boggy places and ditches.

Luzula pilosa, Willd.—Dry banks by the side of woods near Redscar.

—— *campestris*, Br.—Frequent in dry pastures near Preston. Field at the further side of the cemetery.

—— *sylvatica*, Bich.—Wood at Nicky Nook.

Berberis vulgaris, Linn.—Plentifully in a hedge between Rufford and

Martin mere. I have not met with it elsewhere in this part of the county, but last year I found it within a few yards of the Hodder, on the Yorkshire side near Dawford bridge. I have been told that it grows in a hedge near the Preston cemetery.

Peplis Portula, Linn.—Ditch on Ribbleton moor.

Rumex crispus, Linn.—Frequent in waste places and pastures and by road sides.

—— *pulcher*, Linn.—Frequent on heaps of rubbish and by road sides.

—— *sanguineus*, Linn.—Frequent in woods and waste ground.

—— *palustris*, Sm.—Common in boggy and marshy ground and ditches.

—— *obtusifolius*, Linn.—Common in fields and waste places.

—— *Acetosa*, Linn.—Frequent in meadows and pastures about Preston.

—— *Acetosella*, Linn.—On dry hedge banks and in waste places abundantly.

Triglochin palustre, Linn.—Ashton marsh and near Nicky Nook. Marshy ground above Walton wood.

—— *maritimum*, Linn.—Ashton marsh.

Alisma Plantago, Linn.—Brook between the tram-road and Walton. Very common in ditches and ponds about Preston.

—— *ranunculoides*, Linn.—In open drains and trenches on Ribbleton moor, and not unfrequently in similar situations about Preston.

Epilobium angustifolium, Linn.—Plentiful on Pilling moss, near Rawcliffe.

—— *hirsutum*, Linn.—Ditches in the fields at the back of the Bridge inn, Penwortham, and in many similar places about Preston.

—— *parviflorum*, Schub.—Frequently in ditches in the neighbourhood.

—— *montanum*, Linn.—Near Hoghton tower and in several other places.

—— *palustre*, Linn.—Frequent in marshy ground, and by the side of ditches and brooks.

—— *tetragonum*, Linn.—In similar places to the last.

Chlora perfoliata, Linn.—Abundantly in the bottoms among the sandhills north of Southport. Near Roach bridge, on the side of the Darwen nearest to Hoghton tower.

Vaccinium Myrtillus, Linn.—Plentiful on Longridge fell and other hills in the neighbourhood.

—— *Vitis-idaea*, Linn.—Pendle hill.

—— *Oxycocco*s, Linn.—Longridge fell. Pendle hill. Beacon fell, in great abundance. Plentifully on Pilling moss.

Calluna vulgaris, Salsb.—Very abundant on Longridge fell.

Erica cinerea, Linn.—Longridge fell.

—— *Tetralix*, Linn.—Longridge fell, Pendle hill.

Acer Pseudo-platanus, Linn.—In woods and by the sides of rivers plentifully.

Acer campestre, Linn.—Frequent in woods.

Polygonum Bistorta, Linn.—Frequent in meadows and pastures. Meadows below Walton lodge.

—— *aviculare*, Linn.—Frequent by road sides and in waste places.

—— *Convolvulus*, Linn.—Not uncommon in cultivated and waste ground and in corn fields. Common about Leyland and Croston.

—— *amphibium*, Linn.—Frequent in ditches and ponds. By the side of the canal in many places.

—— *Persicaria*, Linn.—Field between the tram-road and Walton.

—— *lapathifolium*, Linn.—In the same field as the last.

—— *Hydropiper*, Linn.—Frequent in ditches and ponds.

Paris quadrifolia, Linn.—Wood at Walton-le-dale. Also in the woods at Redscar and the Tunbrook. Wood between the tram-road and Walton.

Adoxa Moschatellina, Linn.—Hedge banks on each side of South Meadow lane ; also of Watery lane, Fishwick, and in many other similar places.

Butomus umbellatus, Linn.—In the canal a short distance north of Preston. Pit near the footpath to Cadaley mill with *Stratiotes aloides*.

Andromeda polifolia, Linn.—Farrington moss and Pilling moss.

Pyrola rotundifolia, Linn.—Abundantly between Lytham and the light-house.

Chrysosplenium alternifolium, Linn.—In several places on the bank of a brook near the footpath leading from Sion hill, Ribbleson moor, to Fulwood barracks. By a rivulet between Parlike pike and Chipping.

—— *oppositifolium*, Linn.—Very common by the sides of brooks and springs.

Saxifraga umbrosa, Linn.—Near Lower Lee, Wyersdale, by the side of a brook running into the Wyre. By the side of a brook a little to the north of Rawtenstall.

Scleranthus annuus, Linn.—Frequent in corn fields with a dry soil.

Saponaria officinalis, Linn.—In a hedge by the north side of the Ribble between Preston and Walton. Plentifully in several places near Ribchester bridge. By the side of the Calder near its junction with the Ribble.

Silene inflata, Sm.—Frequent in fields and waste places.

—— *maritima*, With.—Under the sand hills at Lytham. Abundantly on the shore near Lytham, in the direction of the Naze point.

Stellaria nemorum, Linn.—Melling's wood and South Meadow lane.

—— *media*, With.—Very common both in cultivated and waste ground.

—— *holostea*, Linn.—Frequent on hedge banks and in woods.

—— *graminea*, Linn.—Frequent in hedges and bushy places.

—— *uliginosa*, Murr.—Wet places in the wood between the tram-road and

Walton, and in the brook below it, and in several other similar places near Preston.

Honckenya peploides, Ehrt.—Sandy places on the banks of the Ribble below Preston frequently.

Arenaria trinervis, Linn.—Melling's wood. Wood at Nicky Nook.

—— *serpyllifolia*, Linn.—Plentifully in dry places on Ashton marsh.

—— *rubra*, Linn.—Frequent in sandy corn fields. Between Hesketh bank and Crossons. Plentifully in a field between Whittle springs and Pickering castle.

—— *marina*, Oed.—Ashton marsh frequently.

Sedum Telephium, Linn.—Clitheroe castle. Hedge at Heapey.

—— *acre*, Linn.—Abundantly in dry places in Ashton marsh. Farm yard wall at Elston.

Oxalis Acetosella, Linn.—Very common in woods and on shady hedge banks.

Lychnis Flos-cuculi, Linn.—Common in wet meadows and marshy places.

—— *sylvestris*, Hob.—Very common in woods and on shady hedge banks.

Cerastium vulgatum, Linn.—Frequent on banks and in waste ground.

—— *viscosum*, Linn.—Frequent in similar places to the last.

—— *semidecandrum*, Linn.—Not uncommon on walls and sandy waste ground.

Spergula arvensis, Linn.—Frequent in corn fields.

—— *nodosa*, Linn.—Ashton marsh frequently. Between Lytham and the lighthouse.

Lythrum salicaria, Linn.—Marshy place by the side of the tram-road, and in many similar places near Preston.

Agrimonia Eupatoria, Linn.—Frequent in the margins of fields and by hedge sides.

Reseda Luteola, Linn.—Frequent about Clitheroe. Between the Naze point and Lytham.

Prunus Padus, Linn.—In several places between Longridge and Knowl green. A fine tree between Ribchester bridge and Salesbury hall. Hedge below Pickering castle, near Whittle springs.

—— *Cerasus*, Linn.—Woods between the Blackburn new road and Redscar abundantly. Wood between the tram-road and Walton.

—— *insititia*, Linn.—In a hedge near the footpath above Walton wood.

—— *spinosa*, Linn.—Very frequent in hedges.

Mespilus Oxyacantha, Gært. n.—Frequent in woods.

Pyrus malus, Linn.—Frequent in woods and hedges.

—— *Aucuparia*, Gært. n.—In mountainous woods. About Longridge and Clitheroe. Not unfrequent about Uplands near Broughton.

Spiræa Ulmaria, Linn.—Frequent in meadows and by the sides of brooks and ditches. Meadows at the back of the Bridge inn, Penwortham.

Rosa spinosissima, Linn.—Frequent in hedges and on dry banks. Hedges near the Grange at Penwortham abundantly. Between Tarleton and Hesketh bank abundantly.

—— *Sabini*, Woods.—Woods about Redscar and Boilton. Wood by the side of the Ribble at Clitheroe

—— *canina*, Linn.—Very common in hedges.

—— *arvensis*, Huds.—Thicket near the footpath by the side of the Salwick brook, in the field next the road leading to Lea road station, the further side from Preston.

Rubus Idæus, Linn.—Penwortham wood. Woods by the side of the river Brock very abundantly. By the sides of the road between Loud bridge and Beacon fell.

—— *cæsius*, Linn.—Frequent in woods and on hedge banks.

—— *Corylifolius*, Sm.—Not unfrequent in hedges. Hedge by the side of the tram-road.

—— *fruticosus*, Linn.—Very common in woods and hedges.

—— *Chamæmorus*, Linn.—Abundant on Pendle hill.

Fragaria vesca, Linn.—Frequent in woods. Woods about Redscar.

Potentilla anserina, Linn.—Very common by road sides.

—— *verna*, Linn.—Is said to grow in dry pastures near Preston, but I have not yet met with it.

—— *reptans*, Linn.—Frequent by road sides and on banks.

—— *Fragariastrum*, Ehrt.—Very common on dry banks.

Tormentilla officinalis, Sm.—Very common above Longridge. About Farringdon moss, and in many similar places.

—— *reptans*, Linn.—Common about Cadaley and other places near Preston.

Geum urbanum, Linn.—Frequent on hedge banks and in woods.

—— *rivale*, Linn.—By the side of the lane leading towards Melling's wood. Wood between the tram-road and Walton.

Comarum palustre, Linn.—In many pits about Preston. Pits by the side of Pope lane, Ribbleton.

Chelidonium majus, Linn.—Lane leading from Whinfield house towards Greave's Town, Ashton. Hedge at the Guide's house, near Naze point. This plant has been found in several places about Preston, but in consequence of its being much sought after by herbalists it is now comparatively scarce.

Glaucium luteum, Scop.—Very abundantly on the sea shore between Hest bank and Morecambe.

Papaver dubium, Linn.—Corn fields between Hesketh bank and Crossons.

——— *Rhæas*, Linn.—In similar situations to the last.

Nymphæa alba, Linn.—Ditches at Martin mere. I am informed that it grows very fine and abundantly in a pond about half-way between Wood Plumpton church and Carr's green, also at Bannister hall Print works. Pit near Croston.

Nuphar lutea, Sm.—In many places in the Salwick brook, especially near Cottam mill. Pond near Clayton's farm, Broughton. In the canal at Rufford bridge.

Aquilegia vulgaris, Linn.—Occasionally in woods by the side of the river Brock, between its source and the Railway station.

Stratiotes aloides, Linn.—Very abundantly in pits on the Moor Hall estate on the north side of Preston, near the footpath leading towards Cadaley mill.

Anemone nemorosa, Linn.—Very common in woods and thickets and on banks.

Clematis Vitalba, Linn.—Frequent about Clitheroe.

Ficaria verna, Huds.—Very common on banks and in woods and meadows.

Ranunculus bulbosus, Linn.—Very common in meadows and pastures.

——— *Lingua*, Linn.—I am informed that this plant grows in ditches between Kirkham and Blackpool.

——— *repens*, Linn.—Frequent in shady places, particularly in gardens.

——— *Flammula*, Linn.—Frequent in watery places.

——— *acris*, Linn.—Common in meadows and pastures.

——— *aquatilis*, Linn.—Brook between the tram-road and Walton, and in many other brooks and ditches.

——— *auricomus*, Linn.—Meadow below Cottam mill towards Ashton Tunbrook wood.

——— *hederaceus*, Linn.—Ditch near Ribbleson moor.

——— *sceleratus*, Linn.—Frequent by the sides of ditches and pits. In several places between Greave's Town and Ashton marsh.

Helleborus viridis, Linn.—In a thicket by the side of the footpath leading from the Wood Plumpton road to Cottam hall.

Caltha palustris, Linn.—Very common in marshy places and ditches, edges of brooks and similar situations.

Ajuga reptans, Linn.—Very common in woods and pastures.

Teucrium Scorodonia, Linn.—Not uncommon in dry woods and fields. Plentiful in a field at Sion hill, Ribbleson.

Verbena officinalis, Linn.—By the side of the road leading from Bolton-le-sands to Carnforth. It is said also to grow near Wood Plumpton church, and near the site of Walton hall; also at Ashton.

Mentha hirsuta, Linn.—Frequent in ditches.

——— *arvensis*, Linn.—Common in corn fields.

——— *piperita*, Sm.—Plentifully by the side of a road at Leyland, opposite to one of the entrances to Worden.

Glechoma hederacea, Linn.—Very common on hedge banks.

Lamium album, Linn.—Frequent by hedges and on heaps of rubbish.

——— *purpureum*, Linn.—A very common weed in gardens.

Galeopsis Tetrahit, Linn.—Very common in corn fields, gardens and waste places.

——— *versicolor*, Curt.—Very common in corn fields near Croston. In corn fields near Rufford. Fields between Scorton and Nicky nook.

Galeobdolon luteum, Huds.—In Melling's wood; also in the Tunbrook wood.

Betonica officinalis, Linn.—Frequent in woods.

Stachys sylvatica, Linn.—Not uncommon by hedges and upon rubbish heaps.

——— *palustris*, Linn.—Frequent by rivers, ditches and pits.

Origanum vulgare, Linn.—I have not observed this plant very near to Preston, but it is very plentiful among the old lime works at Clitheroe. It also grows near Whalley abbey.

Thymus Serpyllum, Linn.—Frequent in dry pastures.

——— *Acinos*, Linn.—By the side of the footpath from Clitheroe to Worston. In many places near Clitheroe.

Scutellaria galericulata, Linn.—By the side of the brook between the tram-road and Walton.

Prunella vulgaris, Linn.—Frequent in pastures.

Bartsia viscosa, Linn.—This plant has been found near Blackpool in marshy ground by the sea. I have seen a dried specimen which was found in that locality. It is said also to grow on Crosby marsh and in ditches near Lathom house. It has also been found behind the sandhills beyond Lytham.

——— *Odontites*, Huds.—Frequent by road sides and in corn fields.

Rhinanthus Crista-galli, Linn.—Frequent in pastures. Abundant in pastures at the back of the Bridge inn at Penwortham.

Euphrasia officinalis, Linn.—Frequent in dry pastures and by road sides.

Melampyrum pratense, Linn.—Frequent in woods and thickets.

Lathræa squamaria, Linn.—I have been informed that this plant has been found in a wood at Samlesbury.

Pedicularis palustris, Linn.—Frequent on mosses and on marshy ground.

——— *sylvatica*, Linn.—Wet heaths and mosses about Longridge.

Linaria Cymbalaria, Mill.—Old walls at Walton hall.

——— *vulgaris*, Mill.—Not uncommon in hedges; hedge banks by the

Ribble, near Preston; by the side of the footpath from Hesketh bank to Crossons.

Antirrhinum majus, Linn.—On Clitheroe castle.

Scrophularia nodosa, Linn.—Not uncommon in woods and shady places; Mellings wood.

——— *aquatica*, Linn.—Very common by the sides of ditches and other watery places.

Digitalis purpurea, Linn.—Frequent in hilly situations, about Longridge.

Limosella aquatica, Linn.—By the side of Ribbleton lane.

Draba verna, Linn.—Not unfrequent on walls and dry banks; road side between Rufford and Scarisbrick.

Lepidium Smithii, Hook.—Occasionally in the edges of corn fields about Rufford, especially towards Martin mere; between Greave's Town and Ashton marsh.

Thlaspi Bursa-pastoris, Linn.—Very common by road sides.

Cochlearia officinalis, Linn.—Melling's wood; Ashton marsh.

——— *Danica*, Linn.—Banks about Blackpool, abundantly; also in similar places, near Lytham.

——— *Armoracia*, Linn.—Plentifully on the bank of the North Union railway, near the bridge over the Ribble.

Senebiera Coronopus, D. C.—I found a solitary specimen of this plant a year or two ago near Walton bridge, by the side of the Ribble.

Cakile maritima, Scop.—Frequent on the sea shore about Lytham.

Cardamine hirsuta, Linn.—Frequent by the side of springs and in shady places; by the side of Pope lane, Ribbleton, very abundant.

——— *pratensis*, Linn.—Very frequent in meadows and watery places

——— *amara*, Linn.—Plentifully in wet places in Melling's wood, and in many similar places about Preston.

Arabis Thaliana, Linn.—Frequent near Lytham towards Blackpool.

——— *Arabis hirsuta*, Br.—Occasionally on walls—Whalley abbey.

Nasturtium officinale, Br.—Not unfrequent in brooks and ditches.

——— *sylvestre*, Br.—Wall above the stone delph at Preston; several other places near Preston.

——— *terrestre*, Br.—Between Greave's Town and Ashton marsh.

Sisymbrium officinale, Scop.—Very common by road sides and in hedges.

——— *Sophia*, Linn.—Dry banks between Church Town (Southport), and the sea shore.

Barbarea vulgaris, Br.—Frequent on the banks of rivers and ditches about Rufford, especially towards Martin mere; side of the brook by Walton hall gardens; in many places between Longridge and Ribchester.

——— *cheiranthoides*, Linn.—In corn fields about Rufford.

Barbarea Alliaria, Linn.—Common in hedges.

Brassica Napus, Linn.—Frequent in corn fields.

—— *Rapa*, Linn.—Frequent by the edges of fields.

—— *campestris*, Linn.—Common in corn fields.

Sinapis arvensis, Linn.—Frequent in corn fields.

Raphanus Raphanistrum, Linn.—Very common in corn fields.

Erodium cicutarium, Sm.—Frequent upon the sand hills about Lytham and Southport, and occasionally on the bank of the Ribble below Preston.

Geranium phœum, Linn.—By the side of the lane leading from Greave's Town to Ashton marsh—by the side of a brook and in an orchard at the back of Osbaldeston house, near Moon's mill, Preston. It is said also to grow on several other spots near the last-named locality, particularly along the course of the same brook; also near the Vicarage, at Much Hoole.

—— *rotundifolium*, Linn.—I am informed that this plant grows in the Church yard at Kirkham.

—— *pratense*, Linn.—Frequent on the south bank of the Ribble at Preston.

—— *molle*, Linn.—Occasionally in dry places in Ashton marsh—borders of corn fields about Rufford.

—— *Robertianum*, Linn.—Very common in woods and on hedge banks.

—— *pusillum*, Linn.—Occasionally on the bank of the Ribble below Preston, by the side of the tram-road.

—— *sanguineum*, Linn.—About Fleetwood, near the sea coast; between the Naze Point, and the Guide's house.

—— *dissectum*, Linn.—Bank between Greaves' Town and Ashton marsh.

Malva sylvestris, Linn.—Frequent by hedges and road sides.

—— *rotundifolia*, Linn.—Occasionally in similar places to the last.

Fumaria officinalis, Linn.—Frequent in gardens and corn fields.

—— *capreolata*, Linn.—Between Hesketh bank and Crossons. Hedge by the side of the road near the Roman camp at Kirkham.

Corydalis claviculata, D. C.—Abundantly in a wood at Higher Brockholes.

Polygala vulgaris, Linn.—Frequent in dry pastures—above Longridge.

Genista Scoparia, Hook.—Hilly ground at the further end of Melling's wood.

—— *anglica*, Linn.—Ribbleton moor.

—— *tinctoria*, Linn.—By the footpath from Grimsargh station to Goosnargh; very frequent at the Naze Point.

Ulex Europæus, Linn.—Very common in heathy places, and on dry banks.

Ononis arvensis, Linn.—Not uncommon in the borders of fields and dry pastures. By the side of the Ribble below Preston, frequently.

Anthyllis vulneraria, Linn.—Plentifully about Clitheroe; also among the sand hills to the north of Southport.

Orobis tuberosus, Linn.—In a field to the left of the old road to Lancaster, beyond Plungington; by the side of the footpath from Sion hill to the barracks.

Lathyrus pratensis, Linn.—Frequent in pastures and hedges.

Vicia Cracca, Linn.—Frequent in hedges and thickets.

—— *sativa*, Linn.—Frequent in corn fields.

—— *sepium*, Linn.—Common in hedges and woods.

Ervum hirsutum, Linn.—In Frenchwood.

Trifolium officinale, Sm.—Between the Naze Point and Lytham, in several places.

—— *repens*, Linn.—Common in meadows and pastures.

—— *pratense*, Linn.—Common in meadows and pastures.

—— *arvense*, Linn.—Sand hills beyond Lytham.

—— *filiforme*, Linn.—Common in dry pastures.

—— *fragiferum*, Linn.—Preston marsh.

—— *procumbens*, Linn.—Common about Clitheroe, among the old lime works. Ashton marsh.

Lotus major, Scop.—Pastures between the tram-road and Walton.

—— *corniculatus*, Linn.—Frequent in pastures.

Medicago minima, Linn.—Near the sea coast north of Southport.

Hypericum quadrangulum, Linn.—Frequent by the banks of rivers and brooks.

—— *perforatum*, Linn.—Frequent on hedge banks and in woods.

—— *hirsutum*, Linn.—Woods and thickets near Redscar.

Hypericum Androsæmum, Linn.—I am informed that this plant grows at Freckleton, also in a wood at Higher Brockholes.

—— *elodes*, Linn.—Pools on Ribbleton moor.

—— *humifusum*, Linn.—I am told that this plant grows by a brook side at Fulwood.

—— *pulchrum*, Linn.—Not uncommon about Rufford; between Scorton and Nicky Nook.

Tragopogon pratensis, Linn.—Banks between Hesketh bank and Crossons; between the Naze Point and Lytham. Ashton marsh.

Picris hieracioides, Linn.—Frequent in the borders of fields.

Sonchus arvensis, Linn.—Frequent in corn fields.

—— *oleraceus*, Linn.—Very common in gardens, borders of fields and waste places.

Prenanthes muralis, Linn.—Occasionally on old walls; plentifully on a dry bank opposite Barton Lodge; in plantations about Claughton hall.

Leontodon Taraxacum, Linn.—Very common in pastures and by road sides.

Apargia autumnalis, Willd.—Frequent in meadows and pastures and on banks.

—— *hispida*, Willd.—Frequent in meadows and pastures.

—— *hirta*, Sm.—Frequent in dry pastures.

Hieracium pilosella, Linn.—Frequent in dry pastures and on banks.

—— *Subaudum*, Sm.—Woods and dry banks; frequent on dry banks near Rufford towards Martin mere. Near Walton hall gardens. Near Leyland.

—— *sylvaticum*, Sm.—Dry banks about Ribbleton moor. Preston, in many places. Common about Clitheroe. Near Walton hall gardens.

—— *murorum*, Linn.—Frequent on old walls and on heaps of rubbish.

—— *paludosum*, Linn.—Holland wood at Walton-le-dale, abundantly.

Hypochaeris radicata, Linn.—Very common in pastures and waste ground.

Lapsana communis, Linn.—Frequent on hedge banks and in waste places.

Arctium Lappa, Linn.—Common in waste ground.

Carduus tenuiflorus, Curt.—Banks between Hesketh Bank and Crossons.

—— *nutans*, Linn.—Between Preston and Walton.

Cnicus lanceolatus, Willd.—Common by road sides and in waste places.

—— *palustris*, Willd.—Frequent in wet meadows and by ponds and ditches.

—— *arvensis*, Hoffm.—Frequent in waste places and pastures.

Carlina vulgaris, Linn.—Among the sand hills, north of Southport; dry bank, near Nicky Nook, Garstang.

Bidens cernua, Linn.—By the side of a pit near the cemetery. Ditches at Croston and Pilling moss.

—— *tripartita*, Linn.—About Marton mere abundantly.

Eupatorium cannabinum, Linn.—Plentifully by the side of the Brock, not far from and on the east side of the Railway; Melling's wood; woods at Bolton and Brockholes.

Tanacetum vulgare, Linn.—Hedge on the right hand side of the lane between Avenham and Walton; by the side of the river at Redscar.

Artemisia vulgaris, Linn.—Frequent in hedges.

—— *maritima*, Linn.—Skipton, near Fleetwood.

Gnaphalium uliginosum, Linn.—Occasionally in damp places where water has stood during the winter.

—— *dioicum*, Linn.—Near Nicky Nook. On hills about Rawtenstall.

—— *minimum*, Sm.—Frequent in sandy fields.

- Gnaphalium Germanicum*, Huds.—Frequent in dry fields and waste grounds.
- Conyza squarrosa*, Linn.—By the road side between Bolton and Carnforth.
- Erigeron acris*, Linn.—Among the sand hills at Lytham.
- Tussilago Farfara*, Linn.—Common on railway banks and in clayey fields.
- Petasites vulgaris*, Desf.—Common on the south bank of the Ribble, near Darwen mouth, and in many other places near Preston.
- Senecio vulgaris*, Linn.—Very common in gardens and waste ground.
- *tenuifolius*, Jacq.—In many places between the Naze point and Lytham; road side near the Black Bull, in Broughton.
- *Jacobæa*, Linn.—Common in dry pastures and by road sides.
- *aquaticus*, Huds.—In wet meadows and by the sides of rivers.
- *viscosus*, Linn.—Dry, barren places between Rufford and Martin mere. Pilling moss.
- *sylvaticus*, Linn.—Leyland moss. Pilling moss.
- *saracenicus*, Linn.—I have been informed that this plant grows in a meadow beyond Redscar, near the Ribble.
- Aster Tripolium*, Linn.—Common in Ashton marsh.
- Solidago Virgaurea*, Linn.—Not unfrequently in rocky places and in woods.
- Inula dysenterica*, Linn.—Occasionally by way sides in wet places; by the side of the tram-road, about a mile and a half from Preston.
- Cineraria palustris*, Linn.—Is said to grow in ditches on Pilling moss.
- Bellis perennis*, Linn.—Very common in meadows and pastures.
- Chrysanthemum Leucanthemum*, Linn.—Dry pastures and road sides.
- *segetum*, Linn.—Not uncommon in corn fields.
- Pyrethrum Parthenium*, Sm.—Occasionally on hedge banks; abundantly on Clitheroe Castle hill.
- Pyrethrum inodorum*, Sm.—Common in waste ground and by way sides.
- Anthemis Cotula*, Linn.—Corn fields, waste ground, and road sides.
- Achillea Ptarmica*, Linn.—Borders of fields, and by the sides of canals; canal side near Whittle springs; road side, Penwortham hill.
- *millefolium*, Linn.—Common on banks and by road sides.
- Centaurea nigra*, Linn.—Common in dry pastures.
- *Cyanus*, Linn.—Occasionally in corn fields.
- *Scabiosa*, Linn.—Dry pastures and in the borders of corn fields.
- Orchis bifolia*, Linn.—In a field at Sion hill, Ribblesdale; plentifully in a field on the north side of the Darwen, above Roach bridge.
- *morio*, Linn.—In several fields in Cottam and Lea.

Orchis mascula, Linn.—Frequent in the borders of fields; very fine and abundant by the Salwick brook, on the west of the road leading from the Plough Inn to Wood Plumpton.

——— *latifolia*, Linn.—Between Lytham and the lighthouse.

——— *maculata*, Linn.—Common in meadows and woods.

Gymnadenia conopsea, Br.—Plentifully about the limekilns near Clitheroe.

Listera ovata, Br.—Fulwood, near Sion hill; Hedge bank, by the side of the road from Clitheroe to Sabden; Tunbrook wood.

——— *cordata*, Br.—Is said to grow on Pendle hill.

——— *Nidus avis*, Hook.—I am informed that this plant grows in a wood at Samlesbury.

Epipactis latifolia, Sm.—Wood on the Lancashire side of the river Hodder, between the higher and lower bridges. I found a solitary specimen growing among the sand hills north of Southport, in August, 1857. It is said also to grow in a wood, near Nicky Nook, Garstang.

——— *palustris*, Sm.—In marshy places, between Lytham and the lighthouse; also in similar spots among the sand hills north of Southport.

Euphorbia Peplus, Linn.—Common in corn fields and gardens.

——— *exigua*, Linn.—In similar situations.

——— *helioscopia*, Linn.—In similar situations.

——— *Paralia*, Linn.—Sand hills between Lytham and Blackpool.

Typha latifolia, Linn.—Pools by the side of the East Lancashire railway, in several places between Croston and Burscough, especially near Rufford. Pit between Kirkham and Marton.

——— *angustifolia*, Linn.—Pit between Kirkham and Marton. By the side of Martin mere.

Sparganium ramosum, Huds.—Brook between the tram-road and Walton, and in many similar places.

——— *simplex*, Huds.—Brook between the tram road and Walton; pits on the Moor hall estate.

Carex arenaria, Linn.—Upon Lytham sand hills.

——— *ovalis*, Good.—Frequent in wet meadows.

——— *sylvatica*, Huds.—In Tunbrook wood. I have not paid much attention to this tribe.

——— *pilulifera*, Linn.—Not uncommon in wet heathy ground.

——— *riparia*, Curt.—Frequent at the edges of rivers, ditches, and pools.

——— *acuta*, Linn.—Frequent in similar situations to the last.

——— *paludosa*, Good.—Frequent in similar places. In Frenchwood.

——— *pendula*, Huds.—Walton wood in considerable quantities; wood between the tram-road and Walton hall gardens, abundantly.

- Carex, extensa*, Good.—Ribbleton moor; near Nicky Nook.
 ——— *dioica*, Linn.—Ribbleton moor.
 ——— *remota*, Linn.—By the side of the road to the cemetery; very abundant in the wood at Nicky Nook.
 ——— *pseudo-cyperus*, Linn.—Pit by the side of the tram-road near Preston; ditch by the side of a wood at Higher Brockholes.
Alnus glutinosa, Gærtn.—Very common by the sides of rivers, brooks, and pits.
Urtica urens, Linn.—Very common in gardens and waste places.
 ——— *dioica*, Linn.—Very common in hedges and waste places.
Ceratophyllum demersum, Linn.—Frequent in ditches and slow streams.
Myriophyllum verticillatum, Linn.—In Ashton marsh.
Sagittaria sagittifolia, Linn.—In the canal near Whittle springs.
Arum maculatum, Linn.—Very common in hedges and bushy places.
Poterium Sanguisorba, Linn.—Frequent about Clitheroe.
Quercus Robur, Linn.—In woods.
Fagus sylvatica, Linn.—In woods.
Betula alba, Linn.—In woods.
Carpinus Betulus, Linn.—Frequent in woods and hedges.
Corylus Avellana, Linn.—Common in woods and hedges.
Pinus sylvestris, Linn.—Occasionally in woods.
Empetrum nigrum, Linn.—On Longridge and Beacon fells.
Myrica Gale, Linn.—By the sides of ditches about Martin mere. Very abundant on Pilling moss.
Humulus Lupulus, Linn.—In hedges occasionally; hedge by the side of the road between Broughton and Myerscough.
Tamus communis, Linn.—Frequent about Clitheroe.
Populus alba, Linn.—Frequent in moist woods.
 ——— *tremula*, Linn.—Not uncommon in woods and hedge rows.
 ——— *nigra*, Linn.—Frequent; banks of rivers and hedge rows.
Mercurialis perennis, Linn.—Very common on hedge banks.
Hydrocharis Morsus-ranæ, Linn.—In a pit near the Preston cemetery; pit by the side of Ribbleton moor; ditches at Martin mere.
Atriplex patula, Linn.—Very common on dunghills and waste ground and by the sides of roads.
 ——— *laciniata*, Linn.—Sea shore at Knot end, opposite to Fleetwood.
Polypodium vulgare, Linn.—Very common upon hedge banks.
 ——— *Phegopteris*, Linn.—Brockholes wood, near Preston; also in several places near Salesbury and Dinkley halls.

Polypodium Dryopteris, Linn.—Abundantly in a wood at Nicky Nook ; on rocky places by the side of the Lead mine brook below Rivington Pike.

Aspidium Filix-mas, Sw.—Frequent in woods.

——— *aculeatum*, Sw.—In woods and on shady hedge banks.

——— *lobatum*, Sw.—In similar situations to the last.

Asplenium filix femina, Bernb.—Occasionally on shady hedge banks.

——— *Trichomanes*, Linn.—Occasionally on walls ; on a bridge near the Wood Plumpton road, where the railway crosses Salwick brook.

——— *marinum*, Linn.—Near Heysham.

——— *Ruta-muraria*, Linn.—On Walton and Penwortham bridges.

——— *Adiantum-nigrum*, Linn.—Goosnargh church yard wall.

Scolopendrium vulgare, Sym.—Common on hedge banks.

Blechnum boreale, Sw.—Common on parts of Longridge fell.

Pteris aquilina, Linn.—Very common in woods.

Osmunda regalis, Linn.—Wood at Higher Brockholes ; abundantly in several places between Rufford and Martin mere, especially by the side of a wood facing the park. Neighbourhood of Catforth.

Botrychium Lunaria, Sw.—Is said to grow on Mellor moor, and also on a hill between Burnley and Colne.

Ophioglossum vulgatum, Linn.—By a hedge side between the tram-road and Walton.

Lycopodium clavatum, Linn.—Pendle Hill.

——— *Selago*, Linn.—Pendle Hill.

Equisetum arvense, Linn.—In fields and by way sides.

——— *fluviatile*, Linn.—Near the footpath leading from Roach bridge towards Hoghton Tower ; and in similar situations about Preston.

——— *sylvaticum*, Linn.—Frequent in moist woods.

——— *limosum*, Linn.—Frequent by the sides of pits.

——— *palustre*, Linn.—Ditches between Rufford and Martin mere.



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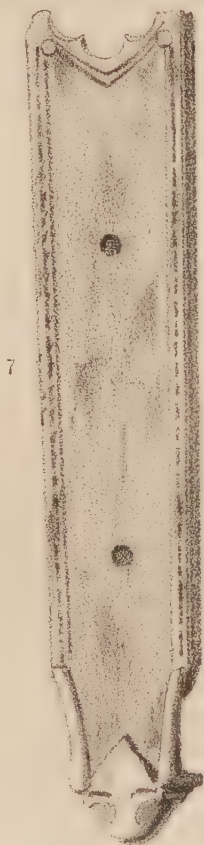
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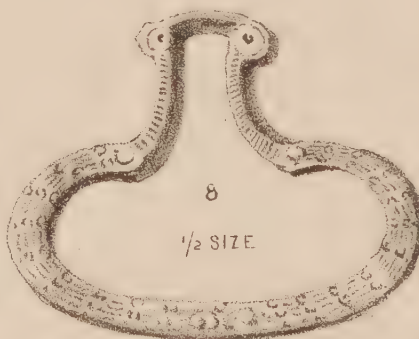
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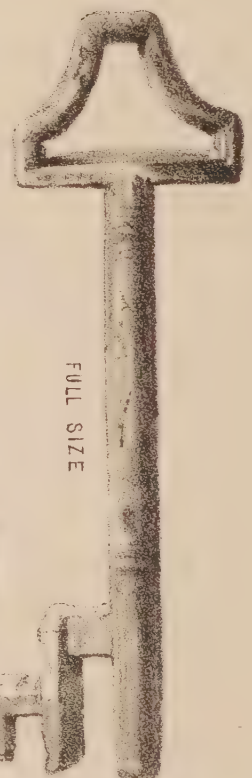
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DESCRIPTION OF SOME ANTIQUITIES FROM MACON, IN THE SOUTH OF FRANCE.

By Mr. H. Ecroyd Smith.

(READ 3RD DECEMBER, 1857.)

THE following remarks constitute but a simple assortment and attempted description of the Antiquarian Remains before us. Owing to the lack of favorable opportunity, I must trust to your indulgence to excuse a more elaborate dissertation.

It is unquestionable that works of art, or even *fragments* of early ingenuity and skill, are the best recording witnesses of the condition of art in times past. In the present day there is an improved taste for such objects, or a higher appreciation of the services which they are capable of rendering; and this has no doubt been promoted by the instrumentality of such societies as this. It is now by no means a rare occurrence for an English traveller to secure such remains, when opportunity offers, for the examination and use of the professedly curious, or for personal reference and interest. The garnering of this small, but interesting collection, is one of those instances.

Journeying, two years ago, in the South-east of France, Mr. R. A. M'Fie had the pleasure, as we propose to accord him the credit, of securing these articles from the too common doom of the melting-pot. The locality where they were found is the present town of Mâcon, capital of the Department of Saone et Loire, and situate on the right, or west, bank of the river Saone, 205 miles, in a direct line, S.E., from Paris. In ancient times it was one of the chief towns of the Œdui, and called by Cæsar, (in his treatise *De Bello Gallico*, Lib. VII. c. 90), *Matisco*, whence the modern appellation Mâcon, formerly written Mascon. It is also mentioned in the Itinerary of Antoninus, and in the "Notitia Imperii," where it is designated *Castrum* (a fortress), and noticed for its manufacture of arrows. The chief Roman remains existing are said to be a triumphal arch, and the ruins of a temple dedicated to the god Janus. Although now a thriving market-town, it has probably not regained the consequence it possessed in mediæval times, having been the see of a bishop until the Revolution. The ruins of

some large ecclesiastical or monastic edifice have been but lately cleared of the accumulated rubbish of ages.*

These facts suffice to account for the miscellaneous character of the collection, which includes representatives of epochs two thousand years asunder.

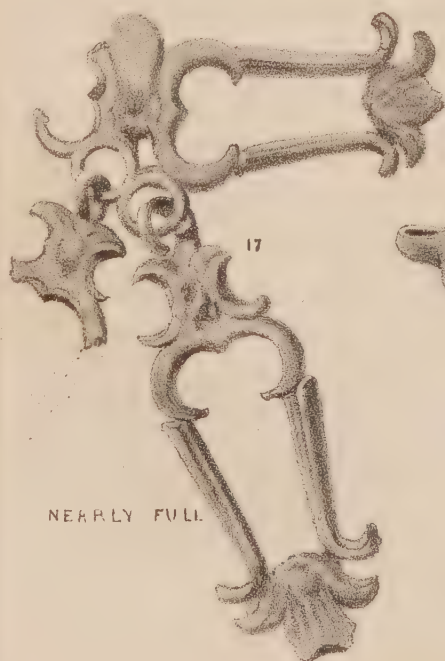
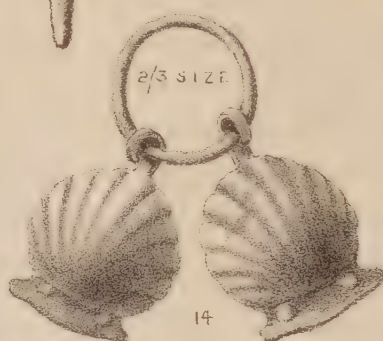
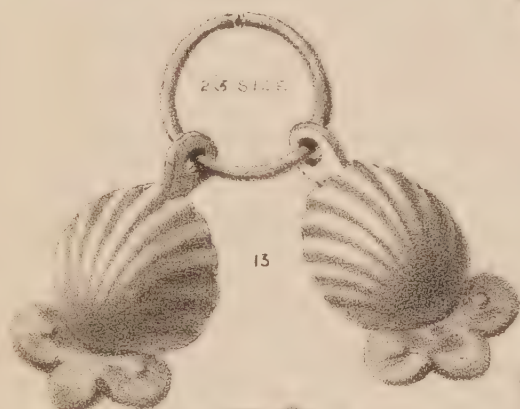
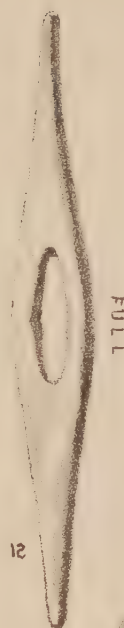
Commencing chronologically, the two brass Paalstabs first claim notice. They are in a fair state of preservation, though one has had a recent fracture, and of the average size of these curious but not uncommon instruments of the Celtic period. This kind is always chisel-shaped, but broadens out at the cutting edge—thus more or less answering the purpose of our axes, hatchets, adzes, chisels, gouges, &c.—and must have been invaluable to our demi-civilized ancestors, whether in the construction of the timber-built hut, or the hollowing out of the trunk-canoe.

Of the Roman and later periods the objects are more numerous, comprising—fragments of a bronze sword, which has apparently been about two feet long, engraved on either side with lines, converging towards a point at about the middle of the blade; and two weights or stamps, respectively weighing 7oz. 5dwt., and 5dwt. 4gr. The larger bears the Roman Fasces within a wreath of laurel. There are also the pendent of a belt, (fig. 7) combining with the ornament of an appendage the use of the strap-tag, which has been strongly riveted to the leather, a fragment being still retained between the metallic plates; and the head of a male figure, with a thick, Nero-like neck, (fig. 6); also a more lengthened bust, (fig. 4) of mythological character; the last two have been affixed in ornament to larger objects.

A statuette in silver, (fig. 5) about three inches in height, represents the three-quarter figure of a young boy, probably an attendant at the bath. His right hand is raised in support of some object upon his head, which was doubtless a vessel of oil or water. The attitude is free, easy, and graceful; the expression of the features subdued and thoughtful, yet mild and pleasing.

Among the minor articles attributable to the Romano-British era, are, an ornamental knob, lambent-shaped, and originally gilt; a ring-fibula or

* The town possesses an additional claim to general interest through its connection with the ancient family De Lamartine, whose fine hereditary mansion remains unfortunately in the possession of strangers, despite the persevering efforts of the present representative, the well-known poet-philosopher, to retain his venerated ancestral home. For many interesting particulars relative to the house, town, and locality, see "*Memoirs of my Youth*," and "*The Wanderer and his Home*," by Alphonse de Lamartine, (Parlour Library, Simms and McIntyre.)



brooch; a stout double-pointed needle, with elongated central eye, (fig. 12); a *tintinnabulum* or bell, (fig. 2) precisely similar in form to one found at Springhead, near Dartford, Kent, with other Roman remains, (*vide* Mr. Roach Smith's *Collectanea Antiqua*, Vol. i., Pl. xli.); a buckle, closely resembling one found on the Cheshire shore last year and now in the writer's possession; and the *scapus* (beam) of a small steelyard, along which the *æquipondium* (poise) was moved. These objects are all composed of brass or bronze, and two coins occur in connection with them, viz.:—a *second brass* of Faustina Marci, Empress of Aurelius, who died A.D. 178; and a *third brass* of Postumus about A.D. 260.

In three specimens of a peculiar kind of fibula or brooch, (fig. 10) the Frankish (coincident with our Saxon) period is represented. In Britain the occurrence of such is almost wholly confined to the Angles, inclusive of Mercia, East Anglia, and Northumbria. They are usually composed of bronze or brass, and gilt; and their form is often more decidedly cross-shaped than in the specimens before us. A large number found in various parts of the districts mentioned, are illustrated in the *Collectanea Antiqua*. Evidently rude imitations of the more elegantly moulded bow, or lyre-shaped fibula of Roman execution, they suffer much by comparison with the latter. Two of these ornaments are of brass; the design is uncertain, but bears some resemblance to the outlines of the human face. The third, of lead, is quite plain, with the exception of a few circular indentations for the reception of enamel, no trace of which, however, remains.

Several large rings, swivels and bolts in brass, evidently portions of horse-trapping or harness, evidence by their massive character that long service was designed rather than ornament. The spout of a large brazen vessel, (fig. 3) terminating in the representation of a dog's head, and two bosses, one of which, (fig. 15) is of floral pattern, may all be referred to the early mediæval period, as also several pairs of ornamental links, (figs. 13, 14, 19), and a chatelaine-suspender (fig. 17). Among the coupled links occur well executed designs, including the escallop or scallop-shell, *pecten opercularis*, the recognised badge of religious pilgrimage. Traces of the rivets which served to secure these objects to leathern straps, &c., are yet very noticeable.

The use of the chatelaine, an appendage to female dress combining ornament with use, would appear to have been not unfrequently revived in this country. Probably copying to some extent the Roman examples, our

ancestors early accustomed themselves to the use of this article, and the Saxon graves of Kent and Essex have produced numerous specimens. The objects attached are mostly very small, including pins, skewers, ear-picks, toothpicks, tweezers, rings, scissors, keys, &c. Similar articles of a slightly varied make and fashion, were suspended from the mediæval chate-laine illustrated by our present example. And the custom appears to have been partially revived a century ago, when the great grandmothers of the present generation hung from bright and elegantly designed openwork of steel their fashionable watches and other small trinkets in the precious metals. The last decade, too, has furnished a modern but by no means sensible instance of an old custom revived, inasmuch as articles of gold, imitating the useful in *shape merely*, are worn for ornament alone. The suspenders are often of steel, and not unfrequently imitations of or adaptations from the better class of those worn in the last century.

In connection with the later monastic establishment before alluded to, and probably exhumed during the recent clearing of the ruins, are, a bell, (fig. 1) three inches in diameter, a key, (fig. 9) and a personal seal, (fig. 16) all of brass, and apparently of about the fifteenth century. The last has a trifoliate orifice in the handle emblematical of the Trinity, and is deciphered S(igillum) Philipe de Losotto. It bears a shield charged with an "ordinary, lozengie or fusillie."

A figure, in brass, of the Virgin and child, has probably been an affixed ornament; it may be referred to about the same period. The crown is tripartite, resembling one upon the head of a female figure in lead, recently found on the Cheshire sea-shore, and perhaps not uncommon at this age.

Lastly come several spoons in bell-metal. Occasionally such shapes are found with figures of apostles at the termination of the handle; hence their ordinary name apostolic. These spoons were in common use in conventual establishments for many successive centuries.

This sketch of his antiquarian souvenir may possibly not merely add to its interest with the owner, but induce other members of the Historic Society who have not hitherto had their attention drawn to the subject, to secure what perhaps occurs frequently to "the roving Englishman" abroad. The objects are illustrative of bygone arts and customs, more or less parental of our own, and consequently deserve zealous preservation.

Fig 1.

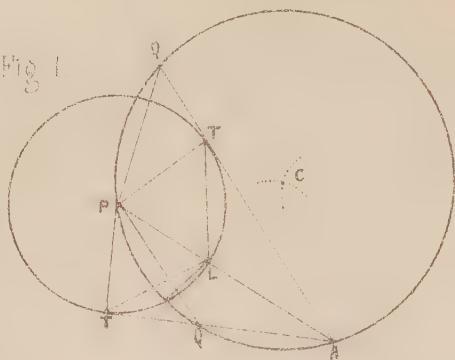


Fig 2.

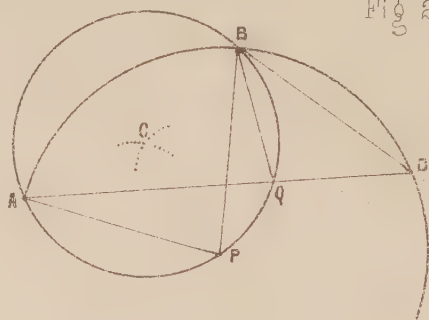


Fig 3.

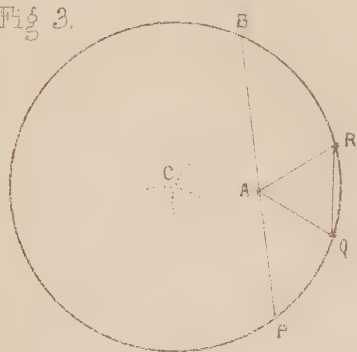


Fig 4.

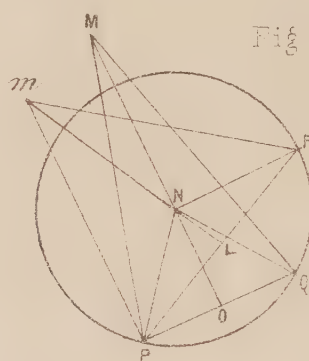


Fig 5.

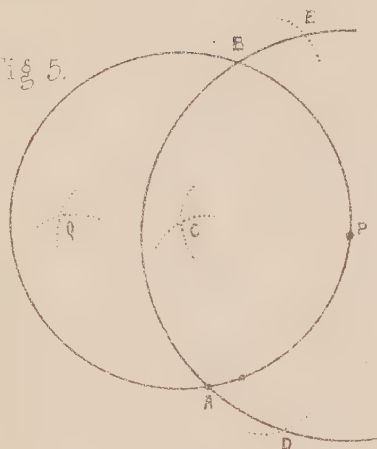


Fig 6.

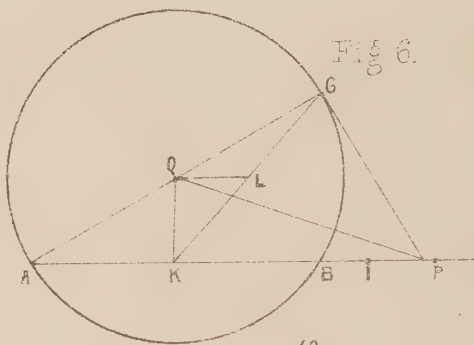


Fig 7.

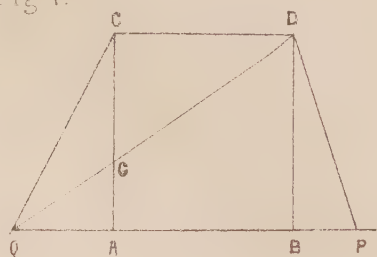
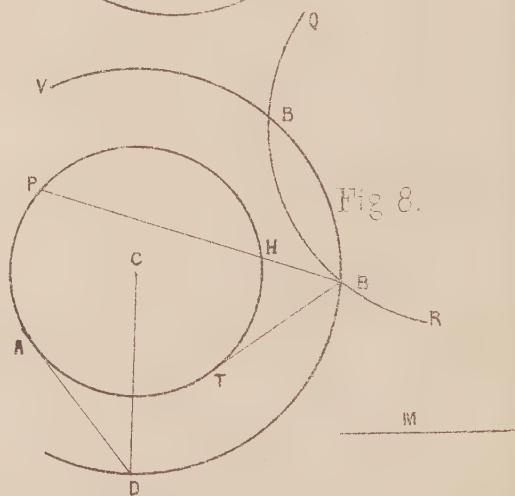


Fig 8.



FURTHER MEMORIALS OF THE LATE J. H. SWALE.

By T. T. Wilkinson, F.R.A.S., &c., &c.

(READ 13TH MAY, 1858.)

In a former volume of the Transactions of this Society I gave a few particulars respecting the life and writings of the late J. H. Swale, and suggested that his manuscripts should be placed under the care of some public body, in order that they might not incur the danger of being lost or dispersed, through the negligence or death of those who possessed them. What I then most feared has, indeed, too soon taken place ; for of the many volumes whose contents are there described, *not one can now be traced*. Shortly after the death of the son of their gifted author, I applied for some information respecting them to the present representative of the family ; and his reply is to the effect that after the most diligent search he cannot find them, nor is he able to say whether they have been mislaid or destroyed. Mr. Charles Swale has, however, kindly placed in my hands the only manuscripts now known to exist, and as some portions of these appear to be worthy of preservation, I presume an account of their contents will not be unacceptable as a supplementary notice of so distinguished a geometrician.

Manuscript No. I, is a small octavo volume containing about 136 pages. It was begun "June 1st, 1823," and appears to have been completed about "January 12th, 1835." The principal contents are "extracts, original letters, scraps, &c.;" but the volume was once intended for geometrical purposes, since many neatly constructed diagrams occur in several of the earlier pages. His admiration of Milton and Shakespere is evident from the copious extracts he has made from an article in the *Edinburgh Review* having reference to these poets ; and there are also some fine passages from *Guy Mannering* in the latter portion of the volume. The political extracts are generally of an extreme character. Like all men of genius he had strong feelings on certain subjects, and did not fail to express himself in plain English when giving an opinion on leading men or passing events.

The poetic element, however, at times predominated, and hence the scraps of poetry to which we shall presently direct attention. He appears to have possessed a correct taste and a just appreciation of the beautiful, both in language and in nature. Some of the extracts in his earlier manuscripts are gems of their kind ; but at a later period they partake of the sombre character of that nervous malady which clouded his later years.

On a loose slip I find a few stanzas relating to a more pleasing subject. They bear internal evidence of having been written during his residence at Chester, and possess sufficient merit to render their preservation desirable.

“ THE RIVER DEE—A SIMILE.

Transparent, pure, illusive stream,
For ever changing—still the same ;
In thee, as in a glass serene,
Man's true identity is seen.
As swift—to ocean's vast expanse,
Onward thy wizard streams advance,
Successive streams their place supply,
And glide in silent swiftness by.
Thus life—which circling years compose,
No fixed, no changeless period, knows ;
Onward the fleeting moments roll,
To vast eternity—their goal !
What, though thy lucent current plays
And sparkles in the solar blaze ;
Or noiseless as the foot of time
Moves on in majesty sublime ;
Or swept by storms, with headlong force,
Proudly pursues its rapid course ;
Yet from thy source spontaneous rolls
The stream which time in vain controls ;
Fed by perennial streams, below
It flows—and shall for ever flow !
And thus through time's revolving years,
Though life a shifting scene appears,
Yet nature's law unchanged ordains
That man's true self no change sustains ;
The mind !—that spark of heavenly flame,
Exists—eternally the same.

From the position which Mr. Swale occupied in the geometrical world it might reasonably be expected that his correspondence would possess more than usual interest—and such is indeed the fact ; but, whether from accident or design, very few letters out of the many which he must have written or received have been preserved. The earliest now remaining

bears date "11th September, 1812," and was addressed to him by the Rev. Thomas Cormouls, of Tanley, near Henley, respecting some errors which the writer fancied he had detected in Sir Isaac Newton's philosophy. It appears that the reverend gentleman intended by a few communications to the newspapers to "put the Gravity Cause, or as it should rather be denominated, the *Material Motive Cause*, into the comprehension of every moderately scientific ingenious person."

In a subsequent communication Mr. Cormouls complains that "there is a combination of the whole body of the book trade, and scientific professors" against him; and attributes it to their dislike of "the simple irrefragable exposition of the experiments and natural facts which disprove the adopted system." He contends that the acknowledgement of error is "a hard and indigestible subject," and declares that he "never yet met with a person of great mathematic eminence who did not stand petrified at the proofs of the impostures of Galileo on Projectiles." The writer further enters into an explanation of the theory of the tides and alludes to some pamphlets which he had published on these subjects, and also to some letters which he had addressed to the Editor of the *Liverpool Mercury*, which do not seem to have been inserted. The whole of these letters are certainly curiosities in their way, for the rev. gentleman's method of spelling even ordinary words is not a whit more *orthodox* than his principles of Natural Philosophy. His case is exactly that of one who is too ignorant of the *first principles* of the Newtonian system to be able to comprehend their results; and because these appear to him inexplicable he abandons the whole for a theory more in accordance with his own limited views and attainments.

Mr. Swale himself was not wholly free from this grave error. He had studied geometry to the exclusion of almost every other branch of mathematics; and hence knew very little of the refined calculus upon which the *System of the World* is based. He always doubted the truth of the results deduced from the application of the *Principia* to natural phenomena, and somewhat damaged his reputation by admitting Mr. B. Prescott's letters against the Newtonian philosophy into the last number of the *Apollonius*. Several of the subsequent letters in order of date are addressed to him by Mr. John Whitley, editor of the *Leeds Correspondent*, and one of the ablest geometers of the day. Mr. Swale had desired to have his "understanding

enlightened" respecting the notation employed in question 154 of the *Gentleman's Companion*, which had been proposed by Mr. Whitley, and he now explains certain doubtful matters on the supposition that the querist "is not in jest." The letter then proceeds to state that Mr. Butterworth's solution to question 117 of the same work "is false," seeing that "the inference which is drawn in the nineteenth line of the solution does not follow from what has gone before, nor can it be proved to be true." It concludes by offering the following questions for Mr. Swale's consideration.

QUESTION I.

"If the vertical angle of a triangle be fixed at a given point and the sides about that angle have a given ratio; then if one of the angles at the base move along a right line given by position and the base make with that line a given angle, it is required to define the locus of the remaining angle."

QUESTION II.

"Given the vertical angle, the length of a line drawn from one of the angles at the base to the centre of the inscribed circle, and either the sum or the difference of the base and one of the sides, to construct the plane triangle."

The next letter merely contains an explanation of a delay which had occurred in the publication of the *Leeds Correspondent*; but in a subsequent communication Mr. Whitley remarks that "after a sound sleep of seven months, it has once more made its appearance." The Prize of six *Correspondents*, it seems, had been awarded to "Mr. Whitehead, of Huddersfield, by mistake, as it fell by lot to Mr. Johnson," who was thus deprived of his honors by a typographical error! Mr. Swale's name appears amongst the proposers of "new questions," but how it came there Mr. Whitley must explain. He says "I have taken the liberty to propose, in your name, the following problem which you will not find involved in much difficulty, viz.: To inscribe a triangle, given in species, having its angles posited in the circumferences of three given concentric circles." The solution of this, and also some points in its history, may be seen in my *Essay on the Ancient Geometry*, p. 88, Vol. VIII., of these Transactions.*

* When I wrote the "Notæ Mathematicæ," Nos. II. and III., in the *Mechanics Magazine* for 1854, and also for some time after the publication of my paper on "The Ancient Geometrical Analysis," in Vol. VIII. of these Transactions, I was of opinion

An intimation is then given respecting the intended Prize Questions for several succeeding numbers of that periodical; the transit of Mercury over the Sun's disc in 1832 was beginning to attract attention, and the *Leeds Correspondent* contains many interesting particulars relative to that event.

During 1823 and 1824 Mr. Swale was engaged in publishing the *Liverpool Apollonius*, and his manuscripts contain several letters to Mr. Dickenson, a correspondent of that able work. In one of the earliest of these he says:—"I had the pleasure of your note and your mercantile propositions. On looking through them, they bring to recollection something of the same kind, though on a comparatively limited scale, which I, some years ago, presented to the late Mr. Rutson, who had asked me the common-place, vulgar question, 'of what use is Algebra?' You have bestowed considerable labor upon them, and they do you credit; but, with respect to *profit*, you must, like Goldsmith, draw upon posterity." Another communication to Mr. Dickenson has reference to an error which the latter had corrected in the *Nautical Almanac*; and it also appears that there were then some thoughts of appointing an Astronomer to the port of Liverpool. Whether that project was carried out at that time or not I am unable to determine, but Mr. Swale thus expresses himself on the subject.

"I have not yet been able to attend to your correction by reference to the *Nautical Almanac* I heard amongst the *literati* that you were a candidate for the post of Astronomer-Royal to the Royal Institution of the *Royal* town of Liverpool. . . . If any bread and cheese hang by this tale of Astronomer, I heartily wish you success." Both the "correction" and the "mercantile propositions," here alluded to, may be seen in the *Apollonius*, No. I., pp. 97-102.

The first number of that work was dedicated to Professor Leybourn, of the Royal Military College, Bagshot, and a letter dated "6th January, 1824," contains an acknowledgement of the compliment. He is glad that Mr. Swale approves of the *Gentleman's Diary*, and inquires respecting the continuance of the *Quarterly Visitor* published at Hull. Mr. Cunliffe, the

that a solution of the *general* problem was a *desideratum*, and considered Mr. William Shepherd, of Bradford, entitled to the honour of having first supplied it. Since then I have found that M. Plateau constructed the case when the triangle is equilateral in Tome III., pp. 1-2, of M. Quetelet's *Correspondance Mathématique et Physique* for 1827, and the general case for any triangle is very elegantly constructed and demonstrated by M. Gerono in pp. 225-226 of the same volume.

elder, it appears, retired from the College in October, 1822, but had not been succeeded by his son as was expected.

In June, 1825, the late Professor Davies wrote to Mr. Swale from Bristol complaining of the difficulty of procuring the *Apollonius*. He alludes to the celebrated problems on Tangencies, and the probability of his publishing a work on the subject. A paper on the Quadrilateral is also mentioned, which was afterwards published in the *Philosophical Magazine* for August, 1826, but I do not find that he ever completed his intentions with respect to the problems of Taction. Mr. Whitley had just published “a course of inquiries into certain series for circular arcs in the *Mechanics’ Magazine*,” which Mr. Davies remarks “are curious and certainly will be of use in the summation of series, whether finite or differential;” but the author (*Sigma*) of an article in the *Philosophical Magazine* for May, 1825, entitled “an outline of general methods in developing certain extensive classes of formula,” is not so fortunate as to merit the commendation of so competent a judge in these matters, for he says—“I shall in a future number of that work meet both his and a number of other objections. I think I shall be able to show that the analytical methods are the *tentative* and not the geometrical. In truth the principle of generalisation upon which the extensive methods of the modern analysis are founded, seems to be very imperfectly understood even by the best analysts, just as the *nature of geometrical certainty* is often completely mistaken even by geometers of the greatest celebrity. The nature of the first principles of geometry seems to have been inculcated by no mathematician of eminence except Professor Leslie, and he is altogether the follower of the late Dr. Beddoes, who, as Playfair sneeringly remarked, ‘was no geometer.’”

The worthy Professor was ever ready “to do battle” for the superiority of geometrical reasonings, and the truth of his positions has since been amply acknowledged by the gradual adoption of his views by the authorities at Cambridge, Oxford and Dublin. At a later date Mr. Davies again inquires respecting the *Apollonius*, and refers to some of his own papers in the *Philosophical Magazine*, and in the *Repository*, as indicating the tendency of his studies. The works of Monge appear to have attracted his attention, and he proposes for solution the following, as an extension of one of the “beautiful theorems” due to this great continental geometer.

QUESTION.

"In any conoid let three sections be made; and cones envelope them two and two in every possible combination (it is of course to be proved previously that *any two sections* are capable of being so enveloped), the six summits will lie three and three in a straight line, and all six will lie in the same plane."

A short letter from Mr. William Wright, another able Yorkshire geometer, merely announces that he has sent a remittance for the sale of a portion of the *Apollonius* and the *Geometrical Amusements*. Its contents offer no points of interest; but the same cannot be said of one dated "July, 1831," from Mr. Swale to Mr. Michael Fryer, editor of Lawson's *Analysis*, Ludlam's *Mathematics*, and Simpson's *Geometry*. He there states that he commenced operations at Liverpool, with "two youths," but ultimately succeeded in "raising a school of 150 pupils, and had a prospect of realizing an ample competence." Too close confinement, however, "and ceaseless labour proved too much for [his] oaken constitution." An "alarming, incurable laceration of the entire nervous system" was the consequence; and this "illness, with its various collaterals, cost [him a large sum] besides imposing upon [him] the necessity of closing [his] establishment."

During 1835 he received a long communication on the state of things in America from his friend Mr. Reston, and in reply he takes occasion to express his political feelings in rather strong terms. In a postscript he desires to be remembered to Dr. Adrian, Professor of Mathematics in Columbia College, New York, to whom he had many years before dedicated the second number of the *Liverpool Apollonius*.

Professor Davies was again in correspondence with Mr. Swale, during 1835. He was then contemplating a "History of Geometry," in which he proposed to acknowledge the deep obligations under which he had been laid by "the excellent models of geometrical research" contained in the *Amusements*, and in the various periodicals to which Mr. Swale had contributed. The *Diaries* he confesses had "sadly fallen off from their olden form and old intrinsic excellence in Geometry;" "but," he continues, "I trust that in other things they have kept pace with the times. The taste is suspended—not lost—for Geometry; and I am not without hopes of living to see, without looking for a long life too, the wheel turn round, and a pure geometrical taste again in the ascendant. I may misread the times, but

I think still that my augury will prove right." In the latter portion of the letter he urges Mr. Swale to continue the *Amusements*, and requests a solution by means of their principles to the following

PROBLEM.

"Four angles are given in magnitude and position, or the right lines which contain them more properly, viz :—A, B, C, D,—it is required to draw two straight lines $a b c d$, and $a b c d$; to cut them so that the lines aa , bb , cc , dd , shall all be parallel to the same given line."

Mr. Swale died in the early part of 1837, of an attack of influenza, brought on by exposure to the weather whilst attending a friend who was embarking for America. It was generally understood that he had left a considerable number of manuscripts, and in 1838 Professor Davies inquired through Mr. Samuel Jones how the family intended to dispose of those which might be found ready for publication. He considered that "the succeeding parts of the *Amusements* would have been an invaluable addition to mathematical Literature," and asked "whether it would not be possible to draw up something in the shape of a Life of Swale, since it is a tribute which we ought to pay to genius like his." This inquiry terminated in an offer on the part of Mr. J. H. Swale, junior, "to entrust the principal portions of the MSS. to [Mr. Davies's hands] and confiding to [his] honor for making such use of them as would most effectually secure to (the deceased) any merit they possessed :"—a proposal which was declined by Mr. Davies on the ground that he was then "engaged upon three different undertakings" of a literary and scientific nature."

Two of the works projected by Mr. Davies proved to be abortions; the "key to Hutton's Course" made its appearance in 1840, but the sale of this, although excellent of its kind, did not justify the publication of the others.

Just before his death I find Mr. Swale in correspondence with a young Hindoo, who had been engaged in the Trigonometrical Survey of India. This gentleman appears to have been of opinion that he had made some important discoveries in pure Geometry as applied to Geodetical problems; but on examination I find they are merely variations of Prob. xxv., p. 221, Leslie's *Geometry*, or of Hirsch, sec. liv., p. 81, when the point C is within the triangle A B D; although "a Prize of 100 rupees had been awarded him by the authorities connected with the survey."

Amongst a considerable quantity of loose papers sent me along with the MSS., I find little besides examination papers which had been drawn up for the use of private pupils. Most of them contain selections of questions in elementary Arithmetic, Mensuration and Algebra, and are therefore of little value ; but the following scraps on Geometry appear to be sufficiently *original* to merit preservation.

THEOREM.

Let AP be any chord in a given circle ; describe a circle to centre P and diameter AP ; to which draw a tangent from A cutting the given circle in Q and join PQ :—then is PQ the radius of the given circle. (Fig. 1.)

DEMONSTRATION.

Let PA cut the circle to centre P in L , and draw PT , LT . By the hypothesis $PA = 2PL = 2PT$; or $PL = LA = PT$, and the angle $PTA =$ a right angle. Then $LT = LA = LP = PT$; or the triangle LPT is equilateral ; that is the angle $PAQ =$ one third of a right angle ; or PQ is the side of a hexagon inscribed in the given circle. $\therefore PQ$ is the radius of the given circle. Q. E. D.

Hence is deduced an original and elegant method of determining the radius of any circle when the centre is *not* given.

CONSTRUCTION.

Assume any point P (Fig. 2.) in the periphery of the given circle, from which as centre describe *any* circle cutting the given one in A and B ; inflect $BD = BP$, and draw AD cutting the given circle in Q :—then QD is equal to the radius of the given circle.

DEMONSTRATION.

Draw PA , PB , PD , PQ and QB .

Then by the circle and equals we have the angle $PBQ = PAQ = PDQ$; and since the triangle PBD is equilateral, the angle $PBD = PDB$, or the angle $QBD = QDB$; and $\therefore QB = QD$;—that is, PQ is perpendicular to BD , and bisects the angle BPD . Q. E. D.

OR THUS :—

Take any equidistant points P , Q , R , (Fig. 3) ; and through A , the

vertex of the equilateral triangle on QR, draw PAB. Then AB is evidently the radius of the given circle.

THEOREM.

Take any points, P, Q, R, in the periphery of a circle ; draw to *any* points M, m ; $PM = QM$, and $Pm = Rm$; and let MN, mN, bisect the angles PMQ, PmR :—then N is the centre of the circle. (*Fig. 4.*)

DEMONSTRATION.

Join P, Q ; P, R ; and let MN, mN, meet PQ, PR, at O and L.

Because PMQ ; PmR, are *isosceles* triangles, and MO, mL, *bisect* their vertical angles ; OM, Lm, bisect the chords PQ, PR, perpendicularly, at O, L ; \therefore N is the centre. Q. E. D.

OTHERWISE.

Draw NP, NQ, NR.

The triangles MPN, MQN, having $MP = MQ$, MN common, and the angle $NMP = NMQ$, are mutually equal ; or $NQ = NP$. For similar reasons, the triangles mPN, mRN, are mutually equal ; or $NR = NP$. Hence $NP = NQ = NR$; and consequently N is the centre of the circle. Q. E. D.

Hence the following remarkably simple and elegant method of determining the centre of a given circle by means of the compasses only.

CONSTRUCTION.

Take in the periphery any equidistant points A, P, B, (*Fig. 5.*) ; describe arcs from A, B, with radius A P, intersecting in Q : from Q, with radius Q P, cut the circle through A, B, to centre P in D, E ; then arcs from D, E, to radius DP, intersect in C the required centre.

The second of these Theorems was proposed, but not answered, in the last number of the *Liverpool Apollonius*.

Manuscript No. II, is a small quarto volume containing “ A course of Promiscuous Problems, with original modes of Determination.” In the whole there are about twenty-nine consecutive geometrical problems of various degrees of difficulty, besides others on isolated subjects, and nine on the Problem of Tangencies as treated by pure Geometry. Nearly the whole of these are fully analysed, constructed, or demonstrated, as the case may

require; and the majority would probably have been included either in the *Apollonius* or the *Amusements* had those works been continued. The limits of the present notice preclude the possibility of my making any lengthened selection of the contents in illustration of the methods of solution adopted by Mr. Swale;—but this omission may be supplied on future occasions when I propose to arrange and classify some of the most important problems, and offer them with a few connecting links of my own for the acceptance of this Society.

The opening problem, however, may be selected as a specimen, and it will also serve as a variation in the modes of treating the second proposition in the *Geometrical Amusements*.

PROBLEM.

To a given line to add another line, such, that the rectangle under the whole and the part added, may be given.

CONSTRUCTION.

Let AB (*Fig. 6.*) be the given line; and AI the side of the given square.

Describe through A, B, a circle of any magnitude, from the centre Q draw QK perpendicular, and QL parallel to AB, making $QK : QL :: IA : QA$; produce KL to the circle at G and draw GP a tangent at G:—the required line is BP.

DEMONSTRATION.

Join QG and QP.

The points P, K, Q, G, are in a circle; or the right angled triangles PGQ, KQL, are equiangular, having $KQ : QL :: PG : GQ :: PG : QA :: IA : QA$. Therefore $PG = IA$, the side of the given square, and $PA \cdot PB = PG^2$ Q. E. D.

OTHERWISE.

Let DC (*Fig. 7.*) the given line, and CA the side of the given square, be perpendicular to each other; and also AQ parallel to CD. Draw DGQ making $CG : AQ :: CD : CA$, and the required line is AQ.

DEMONSTRATION.

Join CQ, draw DB, DP, perpendicular to DC, DQ, meeting QA at B, P.

By composition $DC : CG :: CA : AQ$, or the angle $QCA = CDG =$

PDB. $\therefore QA = BP$; that is, $(QA + CD) \cdot QA = QB \cdot BP = BD^2 =$ (by the circle) AC^2 , the given square.. Q. E. D.

The elegance of these investigations is too obvious to require any comment; but their *simplicity* led Mr. Swale to add the following note as an apology for their insertion:—"This apparently trifling problem is of *singular utility* in construction, and has received the notice of most of the elementary writers; the ardent geometer will not be displeased with the attention I have paid to it in the third part of these *Amusements*." Its connection with *Euclid* iii, 36, is seen at a glance, and it may be here observed that the problem becomes *indeterminate* when AB is the diameter of the circle ABG. As a neat application we may select the following

PROBLEM.

The circle ATH (*Fig. 8*), the curve QR of any order, and the point P, in the periphery of the circle, being given in position; it is required to draw PB cutting the curve QR in B, so that PB. BH shall be equal to a given square, M^2 .

CONSTRUCTION.

From any point A in the circle ATH, draw the tangent $AD = M$; to center C and radius CD describe a circle cutting QR in B, and draw the required line PB.

DEMONSTRATION.

By the circle, $PB \cdot BH = BT^2 = DA^2$, (because of concentric circles) $= M^2$, the given square. (*MS. No. iii, p. 49, bis*). Q. E. D.

This construction and demonstration appear to be due to Mr. J. H. Swale, junior, since they occur in his portion of the volume about to be described.

Manuscript No. III, is a large folio containing about 360 pages. The first 55 of these are devoted to the consideration of a series of "General Problems" in geometry; several of which may hereafter find their way into these Transactions. Nearly the whole are fully constructed and demonstrated; the several cases of each are mostly indicated by neatly constructed diagrams, and occasionally are treated "otherwise" with much elegance and variety. The enunciation of the first will suffice to indicate their nature.

PROBLEM.

The lines CQ, CR, and the point P are given in position; to draw

through P, the right line PQR, so that the sum, difference, or rectangle of CQ, CR, may be given.

The last 228 pages of the volume are numbered consecutively, and contain "solutions in Algebra and Geometry, by J. H. Swale, junior." This portion was commenced, "10th February, 1830," and was continued at intervals up to the time of his obtaining a situation as clerk in a Liverpool Bank.

Most of the Algebraical Problems are selected from the works of Bonnycastle and Bland, but there are a few from other sources, to which original solutions are occasionally given both by father and son. In pages 3 to 25 we find a few easy problems in "Cyclometry," or the construction of geometrical problems *by means of the compasses only*; they were probably intended as easy exercises for scholastic use. The geometrical solutions commence on page 17, and are continued alternately with Algebra up to page 121. "A series of problems exemplifying the application of Algebra to Geometry" is then commenced, which occupies alternate pages up to 159, when the copying becomes irregular and consists of Algebra and Trigonometry as occasion might require. So far as I can judge, the majority of the geometrical questions are selected from those which Professor Bonnycastle appended to his Treatises on *Algebra* and *Geometry*, but the methods of solution are characterised by that elegance and originality which pervades the whole of Mr. Swale's geometrical writings. Even in the consideration of the simplest problems and theorems the hand of the master is apparent; and although the majority of the exercises prepared for his son are necessarily elementary in their character, a selection of solutions of considerable value might be made from the manuscript now under review.

On the present occasion I shall content myself by extracting *three* elegant constructions to the problem of "drawing two lines AC, BC, from two given points A, B, to intersect in a right line DK given in position, so that their difference shall be given."

FIRST CONSTRUCTION.

"From the given points A, B, draw AD, BK, perpendicular to DK, the line given in position; draw BR touching the circle to centre A, and radius equal the given difference. Make $2DA : BR :: BR : BP$; and the tangent PQ, to circle (A), determines the position of AC and BC."

SECOND CONSTRUCTION.

“Draw BK perpendicular to DKC; take KA. AR = KI. KL; in the circle through R touching CK at K, apply, through A, PQ = 2BK; then the line PQ determines C, and thence the position of AC and BC.”

THIRD CONSTRUCTION.

“Draw BK perpendicular to DKC; make $KR^2 - RA^2 = BK^2 - AL^2$; draw RP perpendicular to AK; then the tangent PQ to the circle having centre A and radius AL = given difference, determines the position of QC or AC.”

The demonstrations may be supplied by the geometrical reader.

It is my intention to transfer the three volumes here described to the Library of this Society, as soon as I have made the selections indicated in the course of this supplementary notice. They may thus escape the probable fate of those described in my former memoir, and serve as a slight memorial of one of the ablest geometers of the times in which he lived.

A HISTORICAL SKETCH OF PHOTOGRAPHY.

By Charles Corey, Esq.

(READ 13TH MARCH, 1858.)

To attempt the description of an art, the particulars of which are as “familiar” in every one’s mouth “as household words,” would, it is to be feared, involve the tedium, not merely of a twice-told, but oft-repeated tale; still, though many here are doubtless already conversant with it in most, if not all of its branches, a brief history of its rise and progress may not be wholly uninteresting. Solomon said “there is nothing new under the sun.” I think he was not a photographer; certes, though we cannot carry the knowledge so far back as that, the action of light on most of the salts of silver was known to the ancients, the native chloride or horn silver, called by philosophers *Cornus Lutea*, being most perceptibly affected by the action of light. But notwithstanding the early date of these observations, there is no record, prior to 1722, of any experiments at all calculated to apply this chemical effect to use. Shortly after that date, a Swede named Scheele discovered that this same chloride, when spread upon paper, was speedily darkened by the blue rays, whilst the red produced little or no change. In 1788 Count Rumford communicated a paper to the Royal Society, called “An inquiry into the chemical properties that have been attributed to light.” His experiments, however, were carried out upon gold, more costly but not so susceptible as the subject of our previous remarks, for this is so pre-eminently sensitive as to supersede all other material.

In 1801 Ritter of Jena repeated the experiments of Scheele, and demonstrated the existence of solar rays possessing great chemical power, whilst producing little effect on the organs of vision. In the same year Labillardiere elaborated some previous experiments of Dr. Priestley, and elicited that not only were plants influenced by light in the respective gases thus emitted, according to the Doctor’s theory, but that also plants, blanched by being grown in the dark, had no pores, and that cresses, &c., grown under artificial light have only half the number of pores, compared with those grown in natural light. Numberless other experiments followed, which served to confirm the now universally admitted chemical agency of light; but the most important were by Mr. Wedgwood and Sir Humphrey Davy in 1802. They published a description of a method of copying paintings on glass and making profiles by the action of light on nitrate of

silver. This was certainly the first published statement of any attempt to procure images by the decomposing powers of light. Their account is that with which we are now so familiar, viz., the blackening of the salts of silver in combination with an organic substance when exposed to light. Their efforts were carried out upon white paper and white leather, and gave, of course, very faithful representations in reverse, of everything that was laid over them so as to intercept the rays that fell upon them; but alas, the magician that called this wonder-working power into life possessed not the cabala to arrest its progress; the mystic representations pursued their nigrescent course till all vestige of the much-coveted but fleeting image was absorbed in a universal blot. The failure of two men so eminent, appears to have discouraged all further attempts in England for a long period.

In 1814 M. Niepce, of Chalons, pursuing researches on this subtle agency, was led to remark the property of light in altering the solubility of many resinous substances, and here laid the foundation of the art of engraving by light; very accomplished specimens of which are now before us. Ten years after, M. Daguerre was united with him in a series of researches, and in 1829 they entered into a partnership, to pursue their studies for their mutual benefit. M. Daguerre, however, appears to have been dissatisfied with the slow progress of this method. In 1831 M. Niepce hoped for great success by the use of iodine, but must have had very imperfect ideas of its efficacy, for we find him regretting that he had lost so much time with it. "I do not see," he says, "any greater advantage than from the use of other metallic *oxides*." He having died, M. Daguerre seems to have found its virtue in the evanescent property that iodine evinces when exposed to light, for he published his process in 1839, certainly the first known as manageable in the camera obscura.* This discovery of Daguerre was so highly estimated by the French Government that they rewarded his efforts by a pension of 6000 francs for his life, with a reversion of half that sum for his wife.

M. Daguerre's success induced Mr. Fox Talbot, who had been experimenting with the chloride of silver, to make known the result of his labors; which appeared in the *Philosophical Magazine* of the same year. He there gives directions for the production of both negative and positive images, and indubitably has established a fair claim to be considered the father of the method of printing on paper.

* That admirable invention of Baptiste Porta, who conceived the idea from seeing the objects in the street outside represented on the walls of his dark chamber, thrown by the rays of light pouring through the lenticular opening of a hole in the shutter.

But all these cunning devices were of little avail until Sir John Herschel published his paper, read before the Royal Society, "On the use of liquid hyposulphites for fixing the photographic impressions." This was followed by Mr. Robert Hunt in 1840, proving that the iodide of silver was much more susceptible than the chloride. Who can say how much he had been brought to the conclusion by the fact of M. Daguerre's pictures being obtained by the vapour of iodine brought in contact with the polished surface of a silvered plate, thus producing a crude iodide of silver?

Wondrous as this must have appeared to all who beheld it, it would seem extremely clumsy to our more occult and highly trained ideas at present, for I remember the sister of a friend of mine sitting under this magical process, as it was then supposed to be, for full ten minutes, in the bright blaze of a midsummer sun, until she no longer appeared herself, but a perfect "Niobe all tears." Early in the following years that process was farther advanced by an Englishman, a Mr. John Goddard, who, by discovering the accelerating effect of bromine, a subtle and noxious radical found in seasalt and other compounds, quickly reduced the operation from minutes to seconds. This process reigned without a rival for about ten years, and most beautiful results have been elicited from it; but our subsequent experience only makes us regret that they are so perishable.

It being now generally admitted that these phantasma owe their origin to the changeable character of the salts of silver, a more chemical means of bringing them under the influence of the master spirit, Light, became very generally sought after. Having seen the comparative readiness with which they might be spread upon paper, a more transparent medium was much to be desired, and a viscid and glairy liquid such as the white of an egg, scientifically called albumen, was generally used in France, spread upon plates of glass and rendered sensitive by immersion in a solution of silver. But the crowning effort was due to Mr. Scott Archer, who found that gun cotton, when dissolved in æther and charged with the needful salts, gave such an even, transparent surface, that by the subsequent addition of agents that precipitated the metallic silver, the picture was formed by it on those parts of the plate previously acted upon by light.

We have here pre-supposed all present to be perfectly cognisant of the precise forms by which these various processes are accomplished; but for the uninitiated we may state, that in Daguerre's method the iodide of silver was formed in the dry state by the ready deposit of a film from the vapour

of iodine on the metallic silver. This being partially denuded by the action of the light, rendered it easily attacked by the vapour of heated mercury, which deposited itself in just proportion as the lights or shadows had been deflected on the plate. In the more recent process the same salt was deposited on the plate by the collodion containing iodide of silver, and then, being immersed in a solution of nitrate of silver, the double decomposition produced the necessary iodide of silver with a little nitrate in addition. The consequent deposit of metallic silver by the operation of the needful reagents forms the picture.

We have now traced the art through all its conditions as merely forming a philosophical toy; but the almost forgotten labours of M. Niepce have not been without bringing forth good and useful fruit. His researches have been taken up by his nephew, M. Niepce St. Victor, and have brought about far more utilitarian results than those we have been considering. By the action of light on the finer resins of asphalte, there is little doubt that in time light will be enabled to engrave its own reflections.

A German named Pretsch has found that light acts upon gelatine when combined with bichromate of potassa; this forms a surface sufficiently uneven for a layer of liquified gutta percha to be spread over it, which forms an intaglio that serves as a matrix for the deposit of a sheet of copper by the electrotpe; but being in relief, a second sheet has to be again formed, having hollows similar to an engraved copper-plate, that hold the ink and preserve these gems of art.

I conclude this brief outline by quoting the panegyric of a recent writer. He says, "By the aid of photography every one may become an artist, and when it is remembered that we are enabled in a few seconds to copy the most extensive architectural pile, with all its details of elaborate tracery; to preserve faithful pictures of those English shrines made holy ground to us by the sacred memories which cling to their crumbling walls; to possess ourselves of the most truth-telling representations of those mediæval relics fast mouldering under the imperative touch of slow-wasting time—which stand in their desolation like the embodied past, eager to instruct the present and guide to an enlightened future; and when, in addition to all this, photography is found to furnish the best studies of perspective, to preserve gradations of light and shade in their natural beauty and consistency, it will require no argument to convince every one of the real value of this beautiful art."

ON THE GEOLOGY OF THE FYLDE DISTRICT.

By the Rev. W. Thornber, B.A.

(READ 13TH MAY, 1858.)

Without any premising, I shall enter at once upon my subject by saying, that however the scientific disagree about the subdivisions of geology, they recognize six large divisions, each of them distinctly separated by a "disturbance," viz., the elder and later primitive, the elder and later secondary, and the tertiary with the recent surface of the earth. In the subdivisions of the tertiary system I shall attempt to class the district of the Fylde. My first step, therefore, will be to describe briefly its predominating features, and then to test the characteristics of our neighbourhood by them.

These deposits lie in the hollows or basins of the secondary rocks ; whilst their strata are precipitated in nearly a similar manner to those at the mouths of our present estuaries. They link together the past and the present, gliding through the subdivisions of the Eocene, the Miocene, and the Elder and Newer Pliocene. Marl and clay deposits are predominant, and these being eroded by currents at the bottom of the sea, are filled up with shingles and sand, which are now recognised as the remains of elevated sea beaches, at times very extensive, and frequently forming conglomerate or plum-pudding stone with ferruginous breccia. Intermixed also with these strata are layers of fresh water deposition. The fauna disclosed are all more or less intermixed throughout, the extinct with the recent, or are identical with those that now people our shores.

The first feature of the tertiary group is their formation in basins of the secondary rocks, whence they receive the materials that compose their deposits. In such a hollow the upper strata of our district have been precipitated. The following facts suggest that new red sandstone, if not eroded, lies at the bottom of the basin. This formation is of great extent. It fills the basin of the Eden from the neighbourhood of Brough to the Solway Frith ; it is seen at St. Bees Head, on the banks of the Duddon,

and the western heights of Low Furness. At Cockersand, however, it crops out, and again exhibits its dipping. At the Wyre the basin is deep or is totally abraded, which is doubtful, as it reappears in the bed of the Ribble and thence runs forward through Cheshire, and from the mouth of the Tees to that of the Severn. It is, however, a mistake to suppose the red sandstone to run to the foot of the Pennine chain. At Garstang and Ellel, &c., the rock is of a grey and coarser material, as well as harder, and is neither red sandstone nor the grit of the fells. My supposition, therefore, is that the deposits of our district lie on a floor of red sandstone. Of the presence of coal beneath I will say little. I shall only record that when Professor Phillips surveyed the land at the mouths of our estuaries he pointed to the Fylde as most promising; but at the depth of no less than four hundred yards were we to expect it. And his supposition is not unreasonable, since coal pits were worked by Thos. Tyldesley, Esq., in 1712, at Ellel, and a seam of it at the Bay Horse, near Garstang.

The lowest stratum which manifests itself as a section at Blackpool cliffs is a deep deposit of brown till. Its vast aggregate is not entirely manifested, and much of its mass sinks below the level of the shore. There is enough, however, to describe its characteristics, though not its depth. It is literally laden with stones, like plums in a pudding, so much so that at the base of its disclosure "they constitute fully one-third of the whole." These lie every side up, topsy turvy, in all directions, some standing on their edges, others on their sides, and some again on their flat surfaces. They are sometimes intermixed with huge blocks of granular and fibrous gypsum, and their average size is greater than those in the upper beds; whence we may suppose that the masses of granite, greenstone, limestone, &c., which stud the shore are for the most part the product of this deposit, though there are others as large, lying on the tops of the hills in every quarter. One difference between the boulders in this stratum and those in the superior ones the observer cannot fail to see. They are not so much rounded, though originally torn from the same rocks; whilst more than one-half here are so, wholly or in part. Besides, says Binney, there is scarcely "a slate of a few inches diameter, or a carboniferous rock, without some marks of striæ upon it, nearly always running parallel to the major axis of the stone." Of course the porphyries and greenstones, on account of their hardness, have fewer marks of scratchings upon them.

Such is the lowest deposit of which we have a section, and this to the depth of sixty feet. It carries all the appearance of a raised sea bottom, which after the reception of debris and reproduction of its families of shells, from time to time was overspread with loads of boulders and gravel, that sunk into its soft mud.

The next bed above this till is of a red, stratified, pliable and silty loam, which originally had been precipitated in an horizontal line, from the fact of this deposit being always about the depth of three or four feet, except where it had filled up to the level the eroded hollows of the till on which it lay. It is much twisted and contorted by the heaved up mass beneath. At a glance you perceive how, where it appears, its two anticlinal axes receive the synclinal deposits of the upper beds. Its medium depth is about, as I said, three feet; but it expands or diminishes gradually, whether it rises from the south, or falls to the north, as it draws near, or receives the superior strata of sand and gravel. In fact this layer of loamy sand may be called the base of all the gravel and loose sand deposits throughout the country,—at Preston, Kirkham, Poulton, Marton, and elsewhere. We say that it was formed under water from the presence of boulders and sea shells. I have also detected within it much riddle stone and iron dust, very soft and discolouring the fingers. One thing is remarkable; whilst its top is converted into a thin layer of sandstone, the whole is cased above, as it were, with a single row of boulder pavement or a dark ferruginous breccia, and beneath by a baked, glaze-surfaced and slate-coloured lamina of fresh water silt, hard and leafy, and which evidently had been washed down from higher ground upon a sea beach and sands which the tide was leaving.

The next deposit especially demands our attention, as it alone contains the reservoirs whence we draw water, and consists of those calcareous and aluminous sands which render certain lands so productive. Here opens a wide field for a better geologist than myself. The chief body, however, of this deposit appears to have been a brownish coloured till, at least primary, and may have been most extensively abraded by currents when a sea bottom, as it is entirely abraded or widely intersected with hollows, so deep and long, that the beds of red and grey sand and gravel which fill them up rest on the red loamy silt we have been describing, and miles of country are occupied by them. These materials, whilst distinctly separate, are strangely inter-

mixed. In the space of Poulton market-place we meet with beds of marl, loam, grey and red sand and gravel in close position and near the surface, yet not mixed in an incoherent medley. This must be the result of agencies. We must forego the old cherished idea that the deluge effected this, as well as deposited the whole mass of diversified strata. Had it done so, what a jumblement of matter would there have been! Whatever may have been the modifications produced on the surface of the globe by that catastrophe, they must be discarded here. What then were the agents employed? Internal heat, the wave and probably wind. Compare the deposition and different characteristics of the grey and red sand and gravel. These whilst they lie above one another, beneath one another, under clay and marl, and very frequently cap the summit of our hills, have yet all been precipitated in layers thinner or deeper according to the periods of the year when the swollen stream was heavily surcharged with matter, or was clear and placid. We may see nature still at the same work on the estuaries of the Ribble and Wyre. The currents of the flowing tide being laden with silt, sand, &c., meet at right angles the stream of the Ribble, likewise surcharged. This encounter causes both to drop their burdens, which the wave spreads out in strata, as an inspection of the sides of the Horse-bank channel demonstrates. Besides, whoever is desirous of witnessing how smoothly for miles the wave and its currents can deposit shingle, may be gratified by such a sight near the Fleetwood piles. A gardener could not rake his walks more carefully. But I must look more narrowly at these sands and gravel. Inspect first the grey coarse sand. This is nearly altogether composed of well-rounded quartz, some soft matter and perfect and comminuted shells. It is intersected with beds of shingle, which form a thin scattering beneath or above, and gradually become deposits of greater or less depth. How thinly the laminae of this sand may be laid, you can perceive by the formation of a conglomerate stone within its beds. These are the product of innumerable cakes by which the rise and dip of the deposit may be ascertained. If we count their ages by these plates, like oaks by their circles, their vastness would confound our ideas. So similar also is the deposition of this sand to the ripple marks on the shore, which a transverse section shows, that few would deny that one and the same agent elaborated both. Take a walk on the shore. It inclines to the bed of the ocean, and almost at regular intervals you step upon patches of sand and gravel, distinctly and separately

strewn by the sea, with here and there a row of boulders and a bed of gravel; whilst on the top of the ridge, heaped up by the wave, is a continuous line of shingle, scattered shells, perfect and broken, together with lumps of rolled marl stuck full of gravel. Besides, long heaps of soft blown sand are everywhere manifest; some out of tide reach, others covered with gravel and fresh coarse sand brought by the return of the wave, and a third completely coated with a thick mud deposit of marl spewed down from the cliff by water. Now mount the sea banks and inspect the stratified gravel and grey sand beds. What strikes you? The sand is the same, and is deposited like that which you just now trod on, and after the same order: the pebbles are the same granites, traps, slates, and limestone, and you collect identical shells and exhume flat and rounded nodules of marl in no respect differing from those which the wave daily at present produces from the masses of clay it washes out of the cliffs.

There is, however, another sand to be noticed before we draw our conclusion. I mean a loose red sand which is more abundant than the grey, and appears to have been deposited by a different agent. This sand also, like the grey, lies in various positions. It is of a very soft nature, owing to its quartz being small and not in proportion to the other matter. Its colour also varies. At the top it is red, but becomes gradually lighter as its bed sinks downwards: nor is it so friable; nay, some of it, as on the south declivity of Marton, is not acted upon by acids, and emits an aluminous smell. It is free also from stones and shells—so free that not a particle of one of the latter can be discovered; but on piercing the ferruginous breccia or loamy sit on which it lies, both are met with in abundance. Such my own experience declares; yet further investigation is needed, since I am aware that Professor Forbes notices the discovery of a *solen sèliqua*, a *maetra lustraria*, and a *dentalium* at Preston, since also shells are not found in the fine sands and gravels of Kersal moor; yet the same deposit at Bowden is said to produce them in abundance; and, because workmen have brought me a *Trochus* from Layton out of this deposit; nevertheless it ought to be ascertained whether the shells were really taken out of the soft, loose sand, or the loamy redsilt, which always occurs where the other is found. My enquiries discovered such to be the case with the Layton shell, and so it may be elsewhere.

Another feature regarding this loose red sand must not be omitted.

Inspect it narrowly and you cannot fail to be struck with the thought, that the same agent fashioned it which raises the sand hills on the north and south of Blackpool as well as the ridges on the beach and even on the top of the cliffs. The wind at every blast carries forward the sand wave, leaves its burden and returns for another, which takes a different shape and thickness from being acted upon by irregular currents; and the consequence is the singular conjunction of queer layers of various sizes, thickness, and shape, all intermingled together. Only tincture these with oxyde of iron, and these ridges and hills are counterparts of our red sanded eminences, as sections demonstrate.

What can we conclude then? but that these beds of grey sand and gravel, as well as the drifted loose sand, comprise the remains of ancient sea beaches.

One moment more and I close this portion of my subject. Solidification in calcareous rocks often takes place at the time of deposition, but occasionally afterwards where the water of ferruginous or calcareous springs has flowed through a bed of sand or gravel and deposited iron or carbonate of lime in the interstices between the grains or pebbles: so that in certain places the whole has been bound together into a stone, and the same set of strata in other parts remains loose and incoherent. Dr. Leigh gives a most foolish account of the conglomerates which fall out of our cliffs at Hagberg near Blackpool. This is the true one. Water charged with oxyde of iron and carbonate of lime, trickling down the various substances of the brow, converts in its course certain portions to which it has affinity—the gravel and loose, coarse sand commixed with shells, into solid concrete masses,—leaving the rest unchanged. This arrangement and disposition are in no particular or determined order of stratification; but on the contrary, the different strata and veins, consisting of various depths and diameters, are mixed and interspersed in wild and irregular confusion, sometimes running in horizontal, sometimes in perpendicular, and frequently in zigzag directions. The *vis saxifica*, in the course of its filtrations, appears to avoid the marl and clay, and selects only the gravel and coarse sand as its favorite food; and, as these are disposed in wild and fantastic irregularity, the connection takes place in correspondence with them. The process of their formation is downwards, and they are found hanging in the cliff like icicles and stalactites with their points toward a centre,

crowned generally with a large flat flag of the same substance about three yards from the top of the cliff, with one or more cobble stones round which the infiltration commences. Penny stone, at the edge of the wave, is a huge conglomerate, and hundreds protrude yet from the breast of the cliff of immense bulk and length.

In the beds of marl, however, there takes place a process quite the reverse. As by the infiltration of crystallized carbonate of lime these sands are converted into stone, so the effect of carbonic acid gas is to dissolve granite, or to reduce it to a friable state by its solvent influence on the felspar, thus setting at liberty its other component parts of quartz and mica. What the labourer terms "rotten stone" has been thus acted on. I have also seen limestone boulders taken from the ancient sea beach beneath Pilling moss partially decomposed, the outside being changed into a soapy, whitish matter. I have tested these with muriatic acid, and there was left some residuum; so we may conjecture that the superincumbent bog gives out an acid which takes off the calcareous matter of the pebbles and leaves behind the soft substance. Or the decomposition may occur thus:—part of the bog, by the decomposition of Pyrites, may evolve sulphuric acid. If so, the acid would carry off all the carbonic acid on the surface of the stones and convert the calcareous portion of the coating matter into sulphate of lime, or the material of the Plaster of Paris. I may be speaking unadvisedly, since last week I detected a similar process on a limestone which I took from an ancient foundation within the Roman station at Walton. Some such chemical power, however, has been and is destroying the shells in some deposits. Thus in the abovenamed Pilling beach every vestige of them is gone, whilst in another, not so old, they are fast decaying. In the lower bed of our till the fauna also are very brittle, having lost their calcareous coating; but in the grey sand and gravels they are remarkable for their freshness, some of them; as the periwinkle, cockspur, &c., retaining their natural colours. "Thus," says Lyell, "we have the conservative and disintegrating effects of carbonic acid cementing the loose beach in solid blocks by incrustation; and when in a gaseous state or combined with water dissolving the granite by its action on the felspar."

The upper strata of our tertiary series is clay, which is fickle as to its colour and depth, and even its appearance at all on the surface, either

abraded or supplanted by beds of upheaved red sand. Its freedom from lime makes it suitable for the brickmaker. It is, however, like the marl, of marine origin, since it contains sea shells.*

Stones such as a geologist searches for are not unfrequently picked up. Each of them separately unfolds a history. I have collected magnesian limestone, permian conglomerates, flints that must have been carried from a distance, waterstone from the upper red marls of the trias, blocks of red, white, and shell marble (from the first of which a chimney piece was hewn for Rossal Hall), agates, &c., Kidney iron, gypsum, fossils, the *Gryphæa incurva*, *Cornu Ammonis*, madrepores, crinoidea, &c., impressions of plants, limestones pierced by the borer, and others enclosing recent shells, still retaining their natural appearance, though deprived of their calcareous matter, septarians, oval nodules of flint, and lastly, a black bituminous substance, probably petroleum, from the beds of marl and red sand. Such a specimen the Rev. J. D. Banister took out of the ancient sea beach at Pilling. It was soft when discovered, but soon hardened. Besides I am informed by a builder at Prestwich, that when it occurs in the red sand deposits there, that spot is avoided, as a speck of it chips off the plaster from the wall, if the mortar be mixed with it. We meet with it at times here. The workman calls it a cob of coal.

A question here meets us. From what parent rocks have the boulders and pebbles on the shore and in the strata, viz :—new red sandstones, carboniferous stones, grit, limestones, silurians, slates, granites, greenstones, porphyries, &c.,—been torn, and how were they conveyed? Cumberland and Furness, the rocks of Coniston, Wastdale, &c., may supply the upper slates and silurians, porphyries and lower limestones. Ireland also has contributed its quota, marbles perhaps; but Scotland has been, in my opinion, the greatest contributor. The mode of conveyance is, however,

* The following relative proportion of stones taken from this deposit at Blackpool, is extracted from the "Notes" of Mr. Binney, to whom I am greatly indebted.

	Partly			
	Angular.	rounded.	Rounded.	Total.
Granites, Greenstones, Porphyries, &c.	17	20	12	49
Slates and Silurians	5	16	11	32
Mountain Limestone	3	2	1	6
Coalmeasures.....	4	9	2	9
New Red Sandstone and other superior rocks	1	2	1	4
	<hr/> 36	<hr/> 43	<hr/> 27	<hr/> 100

most perplexing. I can conceive how, on the upheaving of the Pennine chain, the floods of water occasioned thereby would wash the debris and torn fragments of its rocks into the muddy bottom of the sea at its base. I can conceive how afterwards the torrents of the Ribble and Wyre rolled down their boulders and shingle of mountain limestone, mill stone grit, &c.; but there is no marine wave of translation, now in action, that could convey a huge block of rock from the north west to the south east. The present condition of the stones in our deposits, especially in the lower till, scored, polished, angular, partly rounded, and lying all ends up, would seem to require them to have been borne on glaciers and icebergs, which probably floated in our ancient seas, and they were probably thus scratched and scored in their long passage by rubbing against the bottom. My late friend, Mr. Gilbertson, the fossilist of Preston, stoutly maintained, that not only did the Pennine chain manifest sure marks of being wave-worn, but that the sharp edges of its rock had been blunted and abraded by the grindings of icebergs. I too have seen, at the close of the great frost, huge girdles of ice heavily charged with boulders, gravel, and sand thrown on the shore at the Ribble mouth. This is the popular mode of conveyance; so whilst we are looking for a better we must be satisfied.

I might here content myself with having proved that our district must be classed under the tertiary system; but I would fix its position in one of the subdivisions of that group by an inspection of its organic remains, the best criteria of the age of any deposit. No remains of animals have been discovered either in the till, gravel, or sand beds. There have been floated down the streams of the Ribble and the Wyre, some belonging to more ancient rocks, and others to recent deposits, viz:—the upper jaw of the *Chirotherium* or hand-beast, in the possession of Mr. Simpson, watchmaker, Preston, the huge remains of an unknown animal found by the Rev. J. D. Banister in the clay of Pilling, the bones and horns of the *Bos latifrons*, *Bos longifrons*, *Bos primigenius*, *Cervus elaphus*, &c. Shells, however, which often escape obliteration under circumstances where the higher order of animals perish, are furnished in abundance. They are of marine origin; and the time and attention I have bestowed in collecting them from 1830 warrants me in saying that all of them, without exception, are identical with those that people the shores of Lytham, Blackpool, and Fleetwood. The land therefore under review was deposited during the era of the Newer Pliocene. The following list of fossil shells, arranged in

a descending scale according to the system of Lamarck, comprises those which have come under my notice.

CLASSIS MOLLUSCA.

Buccinum undatum.
Purpura lapillus.
Nassa reticulata.
 ——— *incrassata.*
Rostellaria pes-pellicani.
Murex erinaceus.
Fusus antiquus.
 ——— *Bamffius.*
 ——— *Turritella.*
 ——— *Terebra.*
Littorina vulgaris.
 ——— *rudis.*
 ——— *retusa.*
Trochus umbilicatus.
Scalaria communis.
Patella vulgata.
Dentalium entalis.

CLASSIS CONCHIFERA.

Ostrea edulis.
Pecten opercularis.
Mytilus edulis.
Cardium echinatum.
 ——— *edule.*
Venus gallina.
Cyprina Islandica.
Donax trunculus.
Tellina tenuis.
 ——— *solidula.*
Psammobia Feroensis.
Corbula nucleus.
Macra stultorum.
 ——— *subtruncata.*
 ——— *compressa.*
Lutraria elliptica.
Solen vagina.
 ——— *ensis.*
 ——— *legumen.*

These shells have not all been found entire, but the eye of the conchologist can detect any one of them by the inspection of a small portion.

As they identify our district with the Newer Pliocene epoch, so by attending to the position, number, and habits of these testacea we may determine whether the deposition in which they lie was rapid or slow, and whether they lived in deep water or near the shore. During the process of precipitation each layer appears to have had a sufficient time partially to harden before another was strewn upon it. In this state, the wave, flowing over it, deposited its shells; and frequently we meet with them in such abundance—both old and young ones together—that we cannot but believe that these were undisturbed for some period, whilst they had propagated their species. Besides, others show evidence of having lain on the floor of the ocean after death, before they were imbedded. I have found a cockspur that, after having been pierced by a carniferous mollusk like itself, had floated on the surface of the mud until it had received the impression of a small plant. The oyster and *Venus Islandica* are not uncommonly covered with *serpulæ*, and the former with young shells on

the outer surface. I have seen the whelk exhibiting the mark of the acorn shell, which had once adhered to it. In these cases there must have been an interval of clear water, and a space of time must have elapsed between the death of the creature to whose shell it was attached and the burial of the same. But stronger proof is not wanting of slow deposition. Mr. Jelly, of Weston, took from the bottom of a marl pit the trunk of a tree, which he told me was "chock full of cockspurs," more probably pholades, or borers. This colony of borers, which had seized upon the tree, had grown and flourished, and had propagated there their own species, until another periodical deposition imbedded them and their habitation within its mud.

As the deposition of the strata was gradual, so also was the elevation. The process of each required ages. There is no very violent disruption to be seen on the surface of the country, no heaving of one layer over another by earthquakes, those paroxysms of heat. Probably at each change there may have been a "disturbance" which altered the composition, colour, &c., of the superior stratum, all derived, however, from the detritus of the secondary rocks, but the dye from the red sandstone. Let me not be misunderstood to imply that this elevation was one continued, regular heave without depression; there were many oscillations of both, as is evident from the different deposits of shelly marl and clay on the ancient sea beaches and drifted sand. Expansion and contraction, the consequence of heat and cold, would take place during the lapse of ages: now the land would rise, then sink, as the superior argillaceous stratum, a bad conductor, kept in the internal heat, like a top coat, or, when cooled, shrivelled up. During this geological dawn of modern times we have proofs of great changes of level of sea and land, which caused successive periods of diluvial drift, a season of refrigeration and a rafting of innumerable boulders on the glacier and iceberg. At length our orb was to be fitted for the habitation of man. The atmosphere became more genial; our district rose in a dome-like shape, which, as the loaf in the oven, was cracked on the surface by a greater force of heat. Thus the configuration of the Fylde was effected: hence the swelling undulations of its ridges and dales, ever winding from the centre to the Ribble and Wyre, and manifesting to this day the strength and the course of the disturbing element. Thus, too, our rivers received the waters of the district, and their fissures,—previously formed, widened and deepened during ages of oscillation,—became the

channels whereby abraded matter was carried into the basins at their mouths.

But are the changes of elevation still going on? It is the law of nature, say some geologists, accordant with the physical constitution of our planet. Instances of such changes can be verified. I believe that the supposition of Dr. Whittaker concerning the navigation of the Ribble as far as Ribchester in the Roman era, and the uplifting afterwards of its bed, first encouraged the question of continued elevation here. Baines also entertained the idea, as well as the Rev. Mr. Clay of Preston. Just, too, vowed that the earthquake of 1842 changed the level of his house at Bury, and an old gentleman often affirmed that on the day of the Lisbon earthquake our sea suddenly rose and fell and the cliffs moved. I have seen no signs of gradual change of elevation.

Thus the land under review must be classed under the Newer Pliocene deposits. Nor are they uncommon elsewhere. They are found in Cornwall, near the borders of the great estuaries of the Clyde and Forth in Scotland, and in that of the Shannon in Ireland. At Bridgnorth in Shropshire they penetrate sixty miles from the sea. Besides, they rise to a great height. Moel Tryfane in Wales attains the elevation of 1,400 feet, and Preston takes a position 350 feet above the sea.

Such is the tertiary formation of the Fylde: formed under water, washed by the sea during the silence of ages, alternately elevated and depressed, it rose in due time out of the workshop of nature, and has now become the habitation of industry and the theatre of enterprise.

ON THE DIPTEROUS INSECTS OF THE DISTRICT AROUND LIVERPOOL,

By the Rev. H. H. Higgins, M.A.

(READ 18TH FEBRUARY, 1858.)

FAMILY 25. SYRPHIDÆ, Leach.

The Syrphidæ form a moderately large family which is divided into thirty-one genera. One hundred and fifty-three species are described in the *Insecta Britannica*; of these fifty-nine are generally distributed, forty-seven are more or less local, and forty-seven are rare. Sixty-two species have been found by me in the neighbourhood of Liverpool, and of these with one exception, specimens are deposited in the Museum of the Royal Institution. It is probable that several species have yet to be added to our local list.

The larvæ of the Syrphidæ are in their habits extremely various; some are found in decayed wood, others inhabit stagnant pools and are furnished with long tails used in respiration; in a considerable number of species the larvæ are found on leaves where they feed on Aphides, and are thus of great service to the plants on which they live. The eggs of the genus *Volucella* are deposited in the nests of humble-bees; when hatched the larvæ feed upon the larvæ of bees. In many species the skin of the larva hardens and becomes the case of the pupa.

The perfect insects feed on the nectar of flowers, or on the sticky exudation known as honey dew left by the Aphides upon the leaves of trees. There is one habit so characteristic of the Syrphidæ as to deserve especial notice, more particularly because it can hardly have escaped the observation of many who are not Entomologists. Whoever has walked during a sunny hour through woods where the foliage overhead admitted the beams of light to fall on the ground only here and there in scattered patches, must have seen high in the slanting pencil of rays, an insect poised so steadily that but for the vibration of its wings it might seem to be at rest; at the slightest alarm in a moment it has vanished, for the eye cannot follow it into the shade; but scarce a minute will pass if all is

still before it will be there again poised and stationary as before, as if the sunbeam were its home. This habit pertains to many of the species, but is I believe peculiar to the family of the Syrphidæ.

Genus CERIA, Fab.

C. conopsoides, L.—A specimen seen by me at Bidston, Sep., 1856.

Genus ERISTALIS, Latr.

E. tenax, L.—In hedges and on palings near houses, common.

E. sepulchralis, L.—Borders of ponds, Rainhill, Bold, &c., probably not uncommon.

E. intricarius, L.—Lanes and hedges, generally distributed.

E. nemorum, L.—Generally distributed.

E. arbustorum, Dg.—Common, especially on *Senecio Jacobæa*.

E. horticola, Dg.—Found with the last species but not so common.

E. fossarum, Mrle.—Near stagnant water, not rare.

E. floreus, L.—Woods and gardens, rare in 1855 and 1857, common in 1856.

Genus HELOPHILUS, Mg.

H. pendulus, L.—Near watery places, common.

H. versicolor, Fb.—Stated in the *Insecta Britannica* to be rare; not uncommon near ponds at Rainhill, but active and very shy.

H. leineatus, Fb.—By ponds, Huyton quarry and near Tarbock.

Genus SYRITTA, St. F.

S. pipiens, L.—Common everywhere.

Genus XYLOTA, Mq.

X. sylvarum, L.—Woods, Knowsley.

X. segnis, L.—Woods and gardens, not uncommon.

Genus CRIORHINA, Hms.

C. oxyacanthæ, Mg.—Wood, Halsnead, 1856.

C. regula, Flin.—Wood, Halsnead, 1855.

Genus VOLUCELLA, Gf.

V. pellucens, L.—Woods and lanes, not plentiful.

V. bombylans, L.—Woods and lanes, not rare.

Genus SERICOMYA, Mg.

S. borealis, Flin.—Bold wood. The beacon, Billinge. Huyton quarry.

S. superbiens, Mr.—In a lane, Tarbock, and at Rainhill.

Genus CHRYSOTOXUM, Mg.

- C. bicinctum*, L.—Plantation, Windle Moss. Peaty plantation, Knowsley.
C. intermedium, Mg.—Sand hills, New Brighton. Southport.
C. marginatum, Mg.—In a lane, Halsnead. Rare I. B.*

Genus PIPIZA, Fln.

- P. bimaculata*, Mg.—Amongst grass, Rainhill. Halsnead.
P. guttata, Mg.—At the bottom of a hedge, Rainhill.
P. melancholica, Mg.—Wood, Knowsley, 1856.
P. noctiluca, L.—Swept from grass, Halsnead.

Genus CHRYSOGASTER, Mq.

- C. cæmeteriorum*, L.—On Umbelliferæ, not rare.
C. metallica, Fb.—On flowers in moist places.
C. discicornis, Mg.—On Umbelliferæ, not rare.

Genus RHINGIA, Fb.

- R. rostrata*, L.—Plantations and hedges, on herbaceous plants, common.

Genus CHRYSOCLAMIS, Rondani.

- C. cuprea*, Spl.—On the trunk of a tree, Rainhill, 1854.

Genus CHEILOSIA, Mg.

- C. lucorum*, L.—Woods, generally distributed.
C. grossa, Fln.—Hedges, soon after the first appearance of the leaves.
C. means, Fb.—Plantation, Rainhill, 1856.
C. variabilis, Pz.—Moist woods, not uncommon.
C. mutabilis, Fln.—Moist woods, not uncommon.

Genus SYRPHUS, Fb.

- S. pyrastræ*, L.—Amongst grass, end of June, generally distributed.
S. ribesii, L.—Gardens and woods, common.
S. vitripennis, Mgrle.—Closely allied to the preceding species, and equally common.
S. bifasciatus, Fb.—Hedges and on shrubs, not rare.
S. buniger, Mg.—On flowers among grass.
S. corollæ, Fb.—On the banks of a pond, Rainhill. Eastham wood.
S. balteatus, Dg.—Appears about midsummer, not uncommon.
S. tricinctus, Fln.—Plantation, Windle moss. Wood, Halsnead. Rare I. B.
S. glaucius, L.—On Umbelliferæ, Knowsley.

* Insecta Britannica.

- S. laternarius*, Mlr.—On Umbelliferæ, not very common.
S. albostratus, Fln.—Hedges and on flowers, common.
S. umbellatarum, Fb.—On Umbelliferæ, not uncommon. Rare I. B.
S. cinctus, Fln.—Very common in woods, Cheshire.
S. auricollis, Mg.—Woods, Knowsley, Rainhill.
S. manicatus, Mg.—On flowers, common all the summer.
S. clypeatus, Mg.—On flowers, common.
S. cyaneus, Mlr.—On flowers, common.
S. granditarsus, Fstr.—Moist places, often in the shade, not rare.
S. rosarum, Fb.—Garden, Rainhill, 1855.
S. scalaris, Fb.—Amongst grass, not uncommon.

Genus DOROS, Mg.

- D. citrofasciatus*, Dg.—Plantation, Windle moss, 1855.

Genus MELITHREPTUS, Lw.

- M. menthastri*, L.—On flowers amongst grass, not uncommon.

Genus BACCHA, Fb.

- B. obscuripennis*, Mg.—Amongst grass, not rare.

Genus ASCIA, Mgrle.

- A. podagrica*, Fb.—May be swept from grass anywhere in summer.

FAMILY 26. CONOPIDÆ, Leach.

This family contains but one genus, in which are nine British species. It is chiefly remarkable for the parasitic habits of the larvæ, which come to maturity in the abdomen of humble-bees, the perfect insect escaping through the segments.

Genus CONOPS, Fb.

- C. rufipes*, L.—Swept from flowers, not common.
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NOTES ON THE BUSLINGTHORPE BRASS.

By the Rev. John Sansom, B.A.

(READ 14TH JANUARY, 1858.)

+ “Issy gyst Sire Rychard le Fiz Sire John de Boselyngthorp del alme dery
Deus eyt mercy.”

Such is the inscription round the slab, in which the Buslingthorpe Brass is fixed. The stone and brass are described by Boutell, (*Christian Monuments*, 1854, p. 146,) who fixes the date at c. A.D. 1280. Boutell also supplies the arms, (the shield, on which they were originally engraved, having been lost,) as “*Or, a chevron, sable.*” These arms, however, supplied from a contemporary roll of arms, differ slightly from the Buslingthorpe arms, as described in the roll, temp. Ed. II., published in the Parl. Writs by Sir Francis Palgrave, and also by N. H. Nicolas, Esq., (Pickering, 1829,) where they stand as follows:—

“Sire Richard de Boselingthorp, de argent, od le chef endente de sable, e un cheveron de goules.”

These latter were the arms of “Richard, son of Richard de Buselyngthorp, Knt.”; as (a gentleman, who has consulted the document, informs me) is the description given of Richard Buslingthorpe, the *younger*, in the copy of a deed of transfer, dated 1282, to be found in Add. MSS. 6118, in the Brit. Mus. It is observable, that this date goes far to bring back the death of the *elder* Richard, whom the brass commemorates, and the son’s succession to the property, to Boutell’s date of c. 1280. At all events, in the Parliamentary Writs, among the first summonses on record, as early as 1294, this second Richard appears as assessor and collector, in co. Linc., of the tenth granted in the Parliament at Westminster, 22 Edw. 1. From this time he was regularly summoned to perform military service, &c., on account of lands in Notts., Derby, and Linc., down to 1324, when, dying

at an advanced age, he was buried (*I suspect*) at Wellingore,* where he held property apparently *jure uxoris*. John Buslingthorpe, who succeeded to his estates, was (like his father) connected with the Scotch wars under the Edwards. He is also mentioned in Parl. Writs, Rot. Scotiæ, Calend. Rot. Chart., &c. Dying without issue, temp. Ed. III., he was succeeded by his sister, Margaret Bracebridge.

The earliest mention, as far as I am yet aware, of the name of Buslingthorpe, occurs in the *Monasticon*, in a reciting charter of Hen. II., confirming a grant to the canons of Barlings Abbey :—

“Ex dono Walteri de Briselingthorp, et ex concessione Bertranni filii sui, unam bovatom terræ cum pertinentiis in Buselingthorp.”

There is a tradition, that an ancestor of the Buslingthorpes, having *killed a dragon*, in reward for his exploit received a royal grant of the pasture of Lissington. Now, as at the time of the Domesday survey there was no parish of Buslingthorpe, it seems not improbable that this dragon-slayer may have founded the Church, and parish of Buslingthorpe, within his new domain. He may have come originally from the place near Leeds, called Buslingthorpe, (Busli's-ing-thorpe ?) in which neighbourhood Roger de Busli had manors at the time of Domesday. It seems, however, more likely that the name and family of Buslingthorpe *originated in Lincolnshire*, and passed at a later period into Yorkshire. Thomas Hearne, in his *Liber Niger Scaccarii*, at the commencement of vol. ii., has published a very early account of some of the Lincolnshire manors ; in which document a person named *Buselinus* is mentioned as holding certain lands in *Esatorp*, in the same locality as the present Buslingthorpe. This Esatorp, where Buselinus was tenant, would come naturally enough to be called *Buselin's Thorpe*, to distinguish it from other places in the neigh-

* In the north aisle of Wellingore Church is an altar-tomb of alabaster, with the effigies of a knight in armour and his lady. It has neither arms nor inscription remaining ; but from the date assigned to it, and the probability of its representing the lord and lady of the manor, I conjecture that the persons commemorated by this monument are Richard de Boselingthorpe (the *younger*) and Isabella his wife ; who would seem to have made Wellingore their chief residence, as it is also described (in the Inq. p. m.) as their principal and most valuable estate, being placed before Buslingthorpe, Ludborough, or Bothumsell. This altar-tomb may have been erected by John de Buslingthorpe, or by his sister Margaret, wife of John de Bracebridge, both of whom succeeded to the property, the latter upon the death of her brother, s. p.

bourhood of the same name, as Estorp, Aistorp, &c.; and Walter, upon his succeeding to Buselin's property, would become known as *Walter de Buselin-thorpe*. Such would appear to be the most probable origin of the name. At all events, from the time of Walter—shortly after the Conquest—down to the time when the property passed by an heiress to the Bracebridge family, of Bracebridge, co. Linc., and of Kingsbury, co. Warwick, the Buslingthorpes had a residence here, viz., a moated manor-house, perhaps originally one of the *small castles*, so numerous and so much complained of during the reigns of our early Norman kings.

What is meant by the tradition of the ancestor of the Buslingthorpe family having killed a dragon, I will not undertake to say. That it had no allusion to Lincolnshire *drainage*, (which is the *received* opinion,) I am convinced, as well because there is no evidence of any *early* attempts at drainage in this locality, as because there are other localities, to which a myth of *dragon-slaying* is equally attached, where no such works could ever have been needed. Whether the fact of *founding a Church* for the overthrow of the “great dragon,” or whether, supposing the Church to have been originally dedicated in honour of *St. George* or *St. Michael*, (both favourite saints with the Anglo-Norman knights), the circumstance of some *representation* of the patron-saint having been mistaken for the founder, may better account for the tradition, I leave as an open question, without hazarding an opinion: where evidence is wanting, we can conclude nothing by the mere weighing of probabilities.

Mention is made of several members of the family of Buslingthorpe in Rot. de Fin., Test. de Nev., Calend. Rot. Chart., Inq. p. m., Rot. Scot., Dodsw. MSS. (Bodl.), Thoroton's Notts., &c., &c.

The younger Richard had free warren in Staynton and Wraghby, as well as Beselingthorp. He married Isabella, (St. George?) in whose right he held a moiety of the manor of Bothumsel, co. Notts. He also held the manors of Ludborough, near Louth, and of Wellingore, near Temple-Bruern. Wellingore paid an assize to the Hospitallers at Temple-Bruern. And it seems not unlikely, that, before it passed to the Hospitallers, the Buslingthorpes were (more or less) connected with Temple-Bruern; and that Sire *John de Boselingthorpe*, (father of the first, and grandfather of the second *Richard*,) may have been a *Templar* belonging to that Pre-

ceptory, or otherwise connected with their order. His tomb in Buslingthorpe Church bears a recumbent effigy in stone *with crossed legs*. He probably died about the *middle* of the reign of Hen. III. His father, *William*, was either *son* or *grandson* of Bertram, the son of Walter de Buslingthorpe; which *Walter*, I suppose, founded the Church, temp. Hen. I. or Steph.*

Any further particulars relating to this family, or information tending to connect the Buslingthorpes with the place so called at Leeds, would be received as a favour by the compiler of this brief notice.

* The succession of the Buslingthorpes to the "lordship" was in this order:—Walter, Bertram, William, (*another William?*) John, Richard, Richard the younger, John,—succeeded by his sister, Margaret Bracebridge, who was succeeded by Robert Bracebridge, described as her cousin and heir.

ON SLAVERY, AS IT EXISTED IN ENGLAND DURING THE
SAXON ERA, AND THE SUBSTITUTION OF VILLENAGE
AFTER THE NORMAN CONQUEST, UNTIL ITS
GRADUAL EXTINCTION.

By Joseph Wright, Esq., Solicitor, Doncaster.

(READ 20TH MAY, 1858.)

It is not purposed on the present occasion to enter into any lengthened inquiry as to the origin of the Saxon power in this country; but it will be necessary that we should briefly refer to it in passing.

When the Saxons first began to obtain a name, they lived in Cimbrica, Chersonesus; which we now call Denmark.* They appear to have been invited over by Vortigern, the General of the Britons, about A.D. 449, shortly after the Romans withdrew their garrisons, on the decline of their empire under Valentinian the younger. The Britons were at that period "a soft, lazy and unwarlike people,"†

"Unnerved, exhausted, spiritless and sunk,"‡

and wholly unable to defend themselves against the incursions of the Picts and Scots, whom the Roman soldiery had in some measure kept in check. The Britons, when they invited the Saxons, sent ambassadors to them, who described the country "as a land large and spacious, abounding with all manner of necessaries."§ Soon after the return of this embassy, the Saxons, under the command of Hengist and Horsa, arrived in Britain with their flat-bottomed boats, called "cyules," or long boats, and defeated the Picts and Scots in two several engagements.|| The Saxons seem to have been greatly satisfied with the "lands, customs and plenty of Britain," (which according to ancient tradition, was originally called "the country of green hills,")¶ and soon came to the determination of appropriating so goodly an inheritance to themselves.

* Camden, 124.

+ Ib. 123.

‡ Thomson's "Liberty," part 4.

§ Camden, 123.

|| Ib. 122.

¶ Thierry's History of the Conquest of England, vol. 1, bk. 1, page 1.

Under the pretence of ill pay and short diet, they entered into a league with the Picts, raised a sanguinary war against their entertainers, and in all parts put the inhabitants to the sword, wasted their lands, razed their cities, and at length dispossessed the Britons of the best part of the island, and their hereditary estates.* So fearful were the atrocities inflicted upon the inhabitants, that we are told in language, of the most expressive character, "that they suffered whatever a conqueror may be imagined to inflict, or the conquered to fear."† The few who were not massacred or expelled from their habitations, were reduced to the most abject slavery, and were employed in cultivating, for their new masters, those grounds which they once claimed as their own.‡ The Saxons having by their treachery established themselves in Britain, divided it into seven kingdoms, and made of it a heptarchy,§ under which they, for a long time, lived in a flourishing condition; until at last all the other kingdoms, shattered with civil wars, were subdued to that of the West Saxons.||

The peaceful Egbert (who was crowned king of Britain at Winchester)¶ issued an edict that the whole kingdom should be called "Englelond," that is, "the land of the Angles," or Angle Land.** The country afterwards (A.D. 1014) fell for a short time under the yoke of the Danes; but eventually the government (A.D. 1041) reverted to the English under Edward the Confessor, who recovered the regal dignity. The moral state of the inhabitants at this period seems to have been most vicious and degraded, for it is recorded that the "clergy were idle, drowsie and ignorant," and that the laity gave themselves over to luxury, and a loose way of living; insomuch that Gervasius Dorobernensis observes of those times, "*they ran so headlong upon wickedness that 'twas looked upon as a crime to be ignorant of crimes.*"††

"The English at that time," says William of Malmesbury, "used clothes that did not reach beyond the middle of the knee; their heads were shorn, their beards shaven, only the upper lip was always let grow to its full length; their arms were even loaded with golden bracelets, and their skin all set with painted marks."‡‡ The love of display seems to have formed a prominent feature in the Saxon character, especially among

* Camden, 122.

+ Camden, 123.

† Wright's Goldsmith, vol. 1, p. 13.

§ Camden, 130.

|| Ib. 133.

¶ Brady's Old Eng. Hist., 27.

** Camden, 134.

++ Cam. 154.

‡‡ Ib. 154.

the men, for we are told that they had sometimes gold and precious stones round their necks; that the men of consequence or wealth usually had expensive bracelets on their arms, and rings on their fingers; and it is recorded as singular that the bracelets of the male sex, were more costly than those allotted to the women.* We also read of silk garments worn by them, woven with golden eagles. Indeed, personal ornaments seem to have been special objects of testamentary disposition, and were no doubt deemed high marks of esteem. Bequests of this nature are mentioned in several Anglo-Saxon wills, referred to by Turner in his history of that people, but we shall only notice one, where the testator is stated to have bequeathed to his lord a *beah*, or bracelet, of eighty gold mancusæ, and to his lady one of thirty: he appears also to have had two neck bracelets, one of forty, and another of eighty gold mancusæ, and two golden bands.† A mancusa, it may be observed, was of the value of six shillings of the coinage of that day; five pennies made one shilling, and thirty pennies one mancusa:‡ but Turner gives it as his opinion, that the mancusa was a weight, not a coin.§ And here we may mention, that the Anglo-Saxons, at an early period, were eminent as workers in gold and silver, and exported their productions to different parts of the world.||

But we must now come to the subject of this paper, viz., *slavery* as it existed among the Anglo-Saxons. It is well authenticated (perhaps it may be said, too well), that during that era a large proportion of the Anglo-Saxon population were complete slaves, and without any political existence or social consideration in the state. This unfortunate class of men, who were called *Theow* and *Esne*, are frequently mentioned in our ancient laws and charters, and are exhibited in the servile condition of being the property of others.¶ They were bought and sold with the land, and were conveyed in the grants of it promiscuously with the cattle and other property upon it. Thus, in an enumeration of property on an estate, it is said that there were a hundred sheep, fifty-five swine, two men, and five yoked oxen. In the Anglo-Saxon wills these wretched beings are given away, precisely as we now dispose of our plate, furniture or money. An archbishop bequeaths land to an abbey, with

* 2 Sharon Turner's History of the Anglo-Saxons, b. 8, c. 5, p. 59.

+ Ib. b. 8, c. 5, p. 59. † Ib. b. 8, c. 12, p. 127. § Ib. b. 8, c. 12, p. 130.

|| 2 Turner b. 8, c. 9, p. 96.

¶ Cassell's Illustrated Exhibitor and Mag. of Art, vol. 2, p. 369.

ten oxen and two men ; and Elfhelm* bequeaths his chief mansion at Gyrs-tingthorpe, with all the property that stood thereon, both provisions and men.† They were allowed to be put into bonds, and to be whipped. They might be branded like cattle or sheep, and yoked like oxen.‡ They had, however, this advantage over the freemen, that their masters were responsible for their delinquencies,§ while the ordinary freeman, who had not a lord to pay for him, was bound with sureties for his good behaviour. Every Saxon freeman had his undertakers, that he should do every man right, and make satisfaction for the crimes he committed. The freemen, masters of families, their sons at fourteen years of age, and all other freemen, were cast into decuries or tithings ; except clerics, milites, their children and women : that is, ten freemen, or free pledges, were bound all for one another, and were to bring the offending person amongst them to justice, or, if they could not do so, to make satisfaction for the crime he committed.|| The introduction of Christianity, however, led to frequent manumissions, and established another class of people, called *frilazin*, and persons so made free were considered to be in a middle state between slaves and freemen. Those who were freemen from their birth (or freemen of ignoble rank) were called *ceorls*, and constituted a middle class between the nobility and such labourers and mechanics as were slaves, or descended from slaves ; and being generally devoted to agriculture, a *ceorl* was the usual name for a husbandman or farmer.¶ A freeman, however, might lose his liberty, the degradation from liberty to slavery being one of the punishments to which a freeman was liable. A freeman reduced to slavery by the penalty of the law, was called a white *theow*, that is a penal slave, and, when so reduced to slavery, became subject to corporal punishment ; for one who had stolen while free might be scourged by his accuser ; but if, while a white *theow*, he stole, he might be hanged.** So by the laws of Ina (who was king of Wessex in A.D. 688) if the wife and family witnessed his offence, they were all forced into slavery ; and if a freeman worked on the Sunday without his lord's permission, he forfeited his freedom, or subjected himself to the payment of a fine of 60s. ; and if a priest so transgressed he became liable to double

* See his will ; which was first published at the end of Lye's Anglo-Saxon Dictionary. Barrington on Statutes, note (g.) p. 37.

+ 2 Turner b. 8, c. 9, p. 97. † Ib. b. 8, c. 9, p. 99. § Ib. p. 95.

|| Brady's Old English History : The Glossary, p. 55.

¶ 2 Scriven on Copyhold, 671.

** 2 Turner b. 8, c. 9, p. 96.

that amount.* In proof of the very odious nature of the slavery which was at one time practised among the Saxons, we may quote the language of Dr. Henry in his History of Great Britain, where he states that “Wulfstan (who became Archbishop of York A.D. 929) cured the “people of Bristol of a most odious and inveterate custom, which they “derived from their ancestors, of buying men and women in all parts “of England, and exporting them to Ireland for the sake of gain. The “young women they commonly got with child, and carried them to market “in their pregnancy, *that they might bring a better price*. You might have “seen, with sorrow, long ranks of young persons of both sexes, and of the “greatest beauty, tied together with ropes, and daily exposed to sale ; nor “were these men ashamed, oh ! horrid wickedness ! to give up their “nearest relations, nay, their own children to slavery. Knowing the obsti- “nacy of these people, it is said, he sometimes stayed two months among “them, preaching every Lord’s day ; by which, in process of time, he “made so great an impression upon their minds that they abandoned that “wicked trade, and set an example to all the rest of England to do the “same.”†

And here, perhaps, it may not be out of place to refer to the origin of slavery, which we are assured was inflicted for disobedience to parents ; and in support of this view we may quote the testimony of an ancient author (the author of *Les Termes de la Ley*)‡ who tells us “that bondage “or *villenage* had its beginning among the Hebrews, and its original of “Chanaan the son of Ham, who, because he had mocked his father Noah “to scorn, lying dissolutely when he was drunk, was punished in his son “Chanaan with penalty of bondage.”§ That slavery existed in this country at the time of the conquest (A.D. 1066), there can be no doubt ; for Sir William Temple, in his introduction to the History of England, expressly states, that the Normans found among us a sort of people who were in a condition of downright servitude, used and employed in the most servile works, and belonging, both they, their children, and effects, to the lord of the soil, like the rest of the cattle or stock upon it, and that these seem to have been they who held what was called

* Ancient Institutes of Laws of England, p. 23.

+ Dr. Henry vol. 4, p. 238. 2 Turner 68, c. 9, s. 99 ; in note 49.

† Sir William Rastall, who was one of the Justices of the King’s Bench in 1558.

§ *Les Termes de da Ley*, p. 445.

the folkland, *from which they were removable at the lord's pleasure*.^{*} These "lords of the soil," were doubtless the owners of *manors*, which Blackstone tells us are, in substance, as ancient as the Saxon constitution, though perhaps differing a little, in some immaterial circumstances, from those that exist at the present day; and were so called because the lord usually resided there.[†] And here, in passing, it may not be uninteresting to notice that the mistresses of manor houses in former times served out to the poor weekly, with their own hands, certain quantities of bread, and were therefore called *lef-days*, two Saxon words signifying bread-giver; the words were at length corrupted, and the mistress called lady.

As to the institution of manors, we find that the ancient Kings of the realm, who held all the lands of England in demesne, (i.e. in their own hands) usually granted a certain compass, or circuit, of ground, to certain lords and great personages, with liberty for them to parcel the lands out to other inferior tenants, reserving such duties and services as they thought fit, the said lords performing such service, and paying such rents, &c., as the said Kings reserved by such their grants and donations.[‡] Within these manors, courts leet and courts baron were generally held. Manors were in reality the immediate cause of courts baron, without which they could not exist;[§] but courts leet belonged to the King only, and could only be held by special prescription, (which presupposed a grant) or some special royal patent.^{||} The privilege, however, to hold courts leet was generally granted to most lords for the ease of the people, who were *resiants* or inhabitants of their manors.[¶] The proper business of the courts leet was of a criminal nature, viz., to enquire into and punish inferior offences of a public character, such as public breaches of the peace, bloodshed, affrays, encroachments, nuisances, &c., yet it might also enquire of all such other offences, under high treason, as were of a public nature, and committed within its precincts. But offences, whereof the punishment was loss of life or member, were only presentable and enquirable there, i.e., the jurors there might find the indictment; but then it was to be certified over to the justices of the assizes to be tried.^{**} The business of the courts baron, on the contrary, was of a civil nature, viz.,

^{*} Stewart's Black. vol. 2, c. 6, p. 92.

⁺ Ib. p. 90.

[†] Seroggs's Courts Leet and Courts Baron, p. 76.

[§] Coke's Cop., sec. 31, p. 41.

^{||} Seroggs, p. 83.

[¶] Ib. p. 2.

^{**} Ib. p. 4.

1st, to adjust differences between lord and lord adjoining; 2nd, to keep rest and quietness between lord and tenant, that the lord should permit the tenant to enjoy, paying his rent, and performing his services, and that the tenant should not wrong the lord by withdrawing his rents, customs or services; and 3rd, to set things right between tenant and tenant.* These manor courts are still in being in this country, and retain the same name and nature as they had before the conquest; but their jurisdiction has unfortunately been allowed to lie dormant, as by their means ready redress was anciently brought to every man's door, and right was rendered in every village.

In proof of the many manors which existed at the time of the conquest, and as illustrative of the ruthless manner in which the Norman seized to his own use the lands of the Saxon nobility, we need only refer to the observation of Sir Henry Ellis, who informs us, in his introduction to Domesday, (a document which contained a survey of the whole kingdom) that the Conqueror himself held as many as 1290 manors, (Thierry says nearly 1500) exclusive of Berewicks and Sokes. Of these, about 350 had, in some way, belonged to the Saxon crown, and are spoken of as the King's, or had been old demesne.†

WILLIAM appears to have been no less lavish in the distribution of his favors amongst his followers, for it is stated that he gave to Robert, Lord Moreton, Earl of Cornwall, alone, as his share of the spoil, 793 manors; to Alan, Lord Britain, Earl of Richmond, 442 manors, and to Geoffrey, Bishop of Constance, 280 manors;‡ and we find that William, the first Earl of Warren, was at the time of making the general survey referred to, possessed of 200 lordships in several counties of England, whereof Conisberg, in Yorkshire, was one, which had at that time 28 towns and hamlets within its soke.§ This rapacious example of the conqueror seems to have been readily followed by Cromwell in 1650, in his Irish expedition, when he seized the lands of the Irish Royalists, and divided five millions of acres amongst his adherents.|| The Normans, shortly after the conquest of England, introduced the *feudal* system into the country, upon which they enfranchised all such Saxon slaves as fell to their share, by admitting

* Scrogg's, 83. + Stewart's Black c, 6, p. 99, note t.

‡ Brady's Old English History, p. 13, c. § Blount's Ancient Tenures, 186.

|| Scriven on Copyhold, vol. 1, p. 2, in note c.

them to *fealty*, (which was an oath taken to be true to their lord) in respect of the little livings which they had hitherto been allowed to possess, merely as the scanty supports of their base condition; and which they were still suffered to retain upon the like service as they had in their former servitude been used and employed in. But this possession, being clothed with *fealty*, was by that means, advanced into a kind of *tenure*, and differed very much from the ancient servile possession, and was thenceforth called *villenage*,* a term used (according to Sir Edward Coke,) because they lived chiefly in villages, and were employed in rustic works of the most sordid kind, resembling the Spartan helots, to whom alone the culture of the lands was assigned; their rugged masters, like our northern ancestors, esteeming war the only honourable employment of mankind.† In this respect they differed greatly from the Romans, amongst whom agriculture or tillage was in high estimation, insomuch that the senators themselves thought it no degradation to put their hand to the plough.‡ It is not improbable, that the few Saxons who were fortunate enough to retain their lands, would, to a certain extent, imitate the example of their Norman brethren, in the enfranchisement of their slaves; but we are expressly told that neither did our Saxon nor Norman ancestors mean to increase or strengthen the possession of their *villeins*, but to leave that as dependant and precarious as before; save only that as by their admission to *fealty*, their possession was put in some measure upon a *feudal* footing, the lords could not deal with them so wantonly as before.§ To what extent the *villein*, (for we must now so call him) was benefited by the change, (except perhaps in the alteration of *tenure* before alluded to,) we are at a loss to conjecture, when we read that under the Normans the payment of a few shillings was deemed an equivalent for the murder of a man who was not a freeman, while the killing of a deer was punishable with death||—and a man was sentenced to lose both his eyes for the slaying of a boar. Of the Norman himself it is quaintly said by an old author, that “this savage King loved wild beasts as if he had been their father.”¶

Indeed the great bulk of the people scarcely suffered less under the brutal cruelty of the Norman, than the Britons had suffered under their

* Jacob's Law Dictionary, vol. 2, Tit. Tenure, 3 s. 13. + 2 Stewart's Blac., c. 6, p. 93.

† Co. Litt. Lib. 2 c. 5, s. 117. § Jac. Law. Dic. Tit. Tenure, 3 s. 13.

|| Jac. Dic. tit. Game. ¶ Chron. Sax., Gibson p. 191. 2 Thierry b. 6, p. 135.

Saxon ancestors ; for in one district alone, viz., between the Tyne and the Humber, no less than 100,000 of the inhabitants are said to have been destroyed.*

“ Even to feed
 “ A tyrant's idle sport, the peasant starv'd ;
 “ To the wild herd, the pasture of the tame,
 “ The cheerful hamlet, spiry town, was given,
 “ And the brown forest roughened wide around.”†

It is well known that foreigners who visited England about the end of the 15th century, were astonished at the great number of serfs they beheld, and the excessive harshness of the servitude, when compared with what it was on the continent, and even with what it was in France.‡

The *feudal* system (to which we have just referred) was originally a pure military policy of the northern conquering nations, and devised by them as the most likely means to secure their new acquisitions. In consequence of the introduction of that system into the country, it became a fundamental maxim and necessary principle of our English *tenures*, “that the king is the universal lord, and original proprietor of all the lands in his kingdom,” and that no man doth or can possess any part of it, which has not mediately or immediately been derived as a gift from him, to be held upon *feodal* services.§ To all *tenures* under the *feodal* system, (except *tenures* in frankalmoigne and tenancy at will,)|| *fealty* was inseparably incident, and, in explaining the nature of it, we shall have to touch upon *homage*, with which it is usually mentioned, although the two differ in many material points as regards the persons by whom they were performed, the manner of their performance, and the nature of their solemnity. *Homage*, it may be observed, especially concerned service in war, and appertained to knight's service,¶ and was deemed the most honourable, and most humble service of reverence that a frank or free-tenant might do to his lord. It could only be done by tenants in fee-simple and tenants in tail,** and was expressive of the duty of the tenant to his lord, and the affectionate love and protection of the latter towards his tenant.†† When *homage* was received, the tenant knelt humbly before his lord ungirt, with his head uncovered, and, holding both his hands together,

* Buckley's Great Cities of Middle Ages, York, 275.

+ Thomson's Lib., part 4, p. 282.

† Thierry, vol. 5, p. 503.

§ Stewart's Bl., vol. 2, c. 4, p. 51.

|| Co. Cop. sec. 20, p. 33, 3.

¶ Co. Cop. sec. 20, p. 33, 1.

** Co. Cop., sec. 20, p. 33, 3.

†† 1 Co. Litt. L, 2, c. 1, sect. 85.

between those of his lord who sat before him, professed that he became his man from that day forward, of life and limb, and earthly worship, and unto him should be true and faithful, and bear to him faith for the tenements which he claimed to hold of the lord, saving the faith which he owed unto his sovereign lord the king; and when this was concluded, the lord, so sitting, kissed him.*

As to the importance of the latter part of the ceremony on the lord's part, we may notice that Sir Edward Coke tells us, a special Act of Parliament was passed in the 18th Henry VI, to excuse the kissing, in case of *homage* made to the king, by reason of the pestilence then prevalent.† None, in fact, was capable of receiving *homage*, but the lord in person. *Fealty*, on the contrary, concerned service at home, and properly belonged to *soccage* tenure. It could be performed by a tenant for life or for years, and might be received by the lord's steward or bailiff, on his behalf.‡ When the tenant did *fealty* to his lord, he stood before him, held his right hand on a book, and repeated the following form of oath, "Know ye this, my lord, of A., that I shall be faithful and true unto you, and faith to you shall bear for the lands which I claim to hold of you, and that I shall lawfully do to you the customs and services which I ought to do, at the terms assigned—so help me God and the Saints," and he shall kiss the book.§ Although *homage*, as before observed, was deemed more honourable than *fealty*, the latter was more sacred, as the tenant was bound to the performance of it by an oath, which was not the case in *homage*. The reason was this—the tenant was not sworn in doing *homage* to his lord, because no subject was sworn to another subject, to become his man of life and member, but to the king only, and that was called the oath of allegiance or *homagium ligeum*.|| By the statute of the 12th Charles II, c. 24, which was made to free the subject from the burden of knight's service, and the oppressive consequences of tenure *in capite*, all tenures were wholly discharged from the incident of *homage*, not because *homage* itself was any grievance, but because it was more properly an incident to knight's service, which that statute abolished.¶ The law of *fealty*, however, was not altered by the abolition of military

* 1 Co. Litt. L. 2, c. 8 sect. 85.

† Ibid. In note 3. Vid. Rot. Parl. 18 H. 6, vol. 5, p. 31.

‡ Co. Cop., sec. 20, p. 33, 2, 3. § 1 Co. Lit. b. 2, c. 2, s. 91. || Ib. 68 a. c.

¶ Tom. Law Dic. tit. Homage.

tenures under the statute 12 Charles II, c. 24, although the performance of *fealty* is now no longer exacted. In the case of *copyholders* (who, we shall hereafter shew, are the successors of tenants in *villennage*,) a respite of their *fealty* is generally entered as of course, and in other tenures it is altogether passed over.* Of *villeins*, we are told there were two sorts in England; the one termed *regardant* the other *in gross*. A *villein in gross* was immediately bound to the person of the lord and his heirs—the other, a *villein regardant* to a manor, was bound to his lord as a member belonging and annexed to a manor whereof the lord was owner.† A *villein in gross* might be sold to any person, like a horse, a cow or a sheep; and a grant of him in English deeds was expressed in the following manner, “Know that I have sold ——— my knave, and all his offspring, born, or to be born,”‡ but a *villein regardant* could only be sold with the land, as a limb or part of the estate. A male bondman was styled a *villein*, but a female *villein* was called a *neife*.§ They could not acquire any property, either in lands or goods, as against their lord, for if they purchased either, the lord might enter upon them, oust the *villein*, and seize them to his own use. If, however, a *villein* bought lands or goods and sold them to another before the lord seized them, the lord’s right was gone.|| The lord might, in fact, rob, beat and chastise his *villein* at his will,¶ and he might also place him in the stocks, (which according to the opinion of Lord Chief Justice Bridgman was originally not intended as a place of punishment, but only as the constable’s gaol to keep men in hold,)** and might bring an action against any one who presumed to liberate him against the lord’s will. To shew that the punishment of the stocks was only for the base, we may quote the language of Shakspeare in King Lear, where he says—

“Call not your stocks for me: I serve the king,

“On whose employment I was sent to you.”

The lord however might not in the chastisement of his *villein* maim him, or in other words, hurt or take away any member of the body, whereby the *villein* was made less able to defend himself, or offend his enemy, for then he should have an appeal of *Mayhem* against him, the life and members of every subject being under the safeguard and protection

* Tom’s Law. Dic. tit. Fealty.

+ William’s Law Dic. tit. Villein.

† 3 Theorry, sec. 5, p. 504.

§ 1 Co. Lit. b. 2, c. 11, sec. 186.

|| 1 Co. Lit. b. 2, c. 11, sec. 17.

¶ Les Termes De La Ley, tit. Villein.

** 2 Scriv. Cop. 688, n. a.

of the crown; to the end that they may serve the king and their country, when occasion shall be offered.* This appeal, to be effective, must have been brought in the name of the sovereign, to whom the lord was liable to make grievous fine and ransom. For in an appeal of *Mayhem*, a man could only recover damages, which in the case of a *villein*, the lord after execution might take again, so that the judgment in favour of the *villein* would have been of no benefit to the plaintiff; but when the appeal was brought at the king's suit it was otherwise.† In proof of the heinous light in which the law looked upon the destruction of a member of the body, which rendered the subject less able for the defence of the realm, we may refer to a case of voluntary *Mayhem*, (if we may so speak,) which is mentioned by Sir Edward Coke who states, that in his circuit, in anno 1, Jacobi Regis, in the county of Leicester, one Brown, a young, strong, and lustie rogue, to make himself impotent, thereby to have the more colour to beg, or to be relieved, without putting himself to any labour, caused his companion to strike off his left hand; and both of them were indicted, fined and ransomed.‡ Indeed by the ancient law of England, if the defendant in an appeal of *Mayhem* had been found guilty, the judgment against him had been that he should lose the like member to that which the plaintiff had lost by his means—so that if the plaintiff had lost a hand, the defendant also should lose one, et sic de cœteris.§ This punishment seems to have been based upon the Mosaic law of retribution recorded in the 21st chapter of Exodus, which gave eye for eye, tooth for tooth, hand for hand, and foot for foot. The children of *villeins*, where both parents were of that class, were doomed to the like state of hereditary bondage; and it was the same if a *villein* took a freewoman to wife and had issue between them, the issue were *villeins*, as the father still remained a slave as before, (except when he was fortunate enough to marry his own lady, a circumstance we should think of rare occurrence,) for then he became enfranchised for ever; but if a *neife* took a freeman to her husband their issue were free.¶ The *status* of the issue appears to have been grounded on the maxim of the common law that husband and wife are all one person, the existence of the wife being, as it were, merged in that of her husband during her coverture, so that the children followed, *ex-necessitate*, the degree of the male.¶¶ The *neife* however, when she

* 1 Co. Lit. b. 2, c. 11, s. 194, "Ransome."

† Ib. c.

‡ Ib.

§ 1 Co. Litt. b. 2, c. 11, sec. 194, "Ransome."

|| Ib. sec. 187.

¶¶ Ib. sec. 187.

married a freeman was only privileged during the husband's life.* In the event of his death before her demise, she again reverted to the lord.† If children were born from a father who was *nativus* to one lord, and a mother who was *nativa* to another lord, such children were to be divided proportionably between the two lords.‡

Every *villein* however was able and free to sue all manner of actions *against* every person, except his lord,§ and he was competent to act as executor of a freeman, in case he was appointed to that office,|| and the lord could not take out of his possession the goods of the deceased.¶ But a *villein* was not eligible to sit on a jury (for every juryman must be *liber Homo*) and the bailiff who returned him on the pannel was amerced. Nor could a man who had been a *villein nativus*, even after he had been made free by his lord, be produced in court *against* a stranger to *deraign* a cause (that is, to be the champion to prove the matter in question), or *to make his law*, or *law wager*, as it has since been called, if it was objected to him that he was born in *villenage*.**

Having briefly shown the existence of *slavery* or serfdom during the Saxon era, and the substitution of *villenage* by the Normans, we shall proceed to state concisely, the means which the lord might pursue for the recovery of his *villein*, and then the mode by which the latter might obtain his liberty. And first as to the lord's right. When the lord claimed the inheritance of any *villein* who had fled from the manor to which he was *regardant*, or when he had departed from his lord, against the lord's will, the lord might, (previous to the Statute 25 Edw. III c. 18, which gave him a more summary remedy,) have a writ, called a writ *de nativo habendo*, directed to the sheriff of the county, in which the *villein* was supposed to be.†† This writ (which the sheriff was obliged to serve under the pain of attachment,) ran in the following form. "The king to the sheriff, &c., greeting,—We command thee that justly and without delay thou cause A. of C. to have B. his *villein* and fugitive, with all his chattells and his whole sequel, wheresoever he shall be found in thy Bailiwick, unless he be in our demesne, who fled from his land after

* 1 Co. Litt. b. 2, c. 11, s. 187. + 21 Vin. Abr. tit. Villein, pa. 579, k. 2.

† Glanv. lib. 5, c. 6. 1 Reeve's Hist. of Engl. Law, c. 3, p. 99.

§ 1 Co. Litt. b. 2, c. 11, s. 189. || Ib. sec. 191. ¶ Ib. sec. 192.

** 1 Reeve's History of Engl. Law, c. 3, p. 99.

+† Fitzherbert's Natura Brevium p. 185 a.

the coronation of lord H. the king, son of king John, and we forbid upon our forfeiture, that no man him unjustly detain, &c.”* When the lord sued out the writ of *nativo habendo* he had to enter a plaint before the sheriff of the county, setting forth how the party was his *villein*, and how that he had fled from him.† But this writ could not be had by a person who had merely an estate for term of life, or for years, in a *villein*, because it was in the nature of a writ of right to recover the inheritance in the *villein*.‡ By virtue of this writ the sheriff might seize the *villein*, and deliver him unto his lord, in case the *villein* confessed unto the sheriff that he was a *villein*; but if the *villein* alleged that he was a freeman, then it seems the sheriff ought not to seize him, but the lord ought to sue out a writ of *pone*, (which it will not be necessary to give at length,) the object of which was to remove the plea before the Justices of the Common Pleas, or before the Justices in Eyre. For the sheriff had no authority to determine the title of *villinage* in the county.§ But if the *villein* purchased a writ *de libertate probanda* before the lord had sued out the *pone* to remove the plea before the Justices, then the writ of *libertate probanda* was a *supersedeas* unto the lord that he proceed not upon the writ of *nativo habendo* till the Eyre of the Justices, or till the day the plea be adjourned before the Justices, and that the lord ought not to seize the *villein* in the meantime, and if the lord sued out a *nativo habendo*, and the *villein* purchased this writ of *libertate probanda*, by that, the sheriff should not proceed further in the writ of *nativo habendo*, but the whole plea should be adjourned before the Justices in Eyre, and then the writ of *nativo habendo* and the Record should be sent before the Justices in Eyre, and the lord should declare thereupon, and the *villein* should make his defence, and plead thereunto; and the *villein* should not declare upon the writ *de libertate probanda*, nor should anything be done thereupon. For that writ was but a *supersedeas* to surcease for the time, and to adjourn the Record and the writ of *nativo habendo*, before the Justices in Eyre. ||

As a matter of curiosity it may not be uninteresting to give the *villein's* writ, or writ of *libertate probanda*. It was in the following form:—

“The King to the Sheriff, &c. A. and B. her sister have shown us that “whereas they are free women, and ready their liberty to prove, F., claiming them his *neifes*; vexeth them unjustly: and therefore we command you

* Fitzherbert's *Natura Brevium*, p. 186. + *Ib.* 187 a. † *Ib.* 185 b.

§ *Fitz. Nat. Brev.* 187 a. || *Fitz. Nat. Brev.* 186 c.

“ that if the afores. A. and B. shall secure thee their liberty to prove, then
 “ put that plea before our Justices at the first assizes when to those parts
 “ they shall come, because such like proof it belongeth not to thee to take,
 “ and in the meantime the same A. and B. peace thereupon to have, cause
 “ thou, and say to the afores. F. that then he be there, that plea against
 “ the afores. A. and B. thereupon to prosecute, if he will, and have there
 “ this writ. Witness, &c.”*

When the lord pursued his remedy by writ of *neife* he had, in order to establish his claim to the *villein*, to bring with him two persons, at the least, who were of the *villein*'s blood, that would confess themselves to be *villeins*,† otherwise the writ should abate, and the *villein* was for ever enfranchised. But in a *nativo habendo*, after the plea was removed by a *pone*, if the defendant in his proper person confessed himself to be *villein*, that was sufficient evidence of title, and the lord need not bring any proof thereof,‡ and by this confession, all his issue born afterwards were *villeins* and *neifes*, but not such issue as were born before.§ It seems, however, that the cousin female could not be brought to prove the male *villein*,|| nor could a *neife* who married a freeman be produced to prove *villenage* during the coverture. So the person who claimed to be free, was to bring into court his nearest relations, descended from the same stock with himself: and if *their* freedom was recognised and proved in court, *this* was construed in his favour, so as to free him from the yoke of servitude.¶

If a *villein* fled to the lands of the crown, and remained there a year and a day, without claim or seizure by the lord, the lord could not have a writ of *nativo habendo*, or seize him, so long as he continued in the King's demesne, and the reason of this was in respect of the service which he did to the King in ploughing and tillage and other labours of husbandry for the King's benefit; ** but if the *villein* had not remained within the King's possessions for that period, then the lord might have such writ unto the sheriff, which ran as follows:—

“ The King to the Sheriff, &c. We command thee that unlesse A., whom
 “ B. claims to be his *villein* and fugitive in thy county by our writ, hath
 “ remained in our demesne of S. for one year and a day without challenge,
 “ let not the plea continue in the county aforesaid, because he hath re-
 “ mained in our demesne lesse time. Witness, &c.”††

* Fitz. Nat. Brev., 187 (f). + Ibid 189 (h). † Fitz. Nat. Brev. 189 (h.)

§ 21 Vin. Abr. Tit. Vill. p. (a) 573, 3 and 4.

|| Fitz. Nat. Brev. 189 h. marg. ¶ 1 Reeve's Hist. of Eng. Law, c. 3, p. 143.

** 1 Co. Litt. b. 2, c. 11, sec. 204, 137. ++ Fitz. Nat. Brev. 190 a.

If, however, the *villein* remained in any other manor than in ancient demesne, which was in the possession of any other lord than the King, and there stayed a year and a day, or for many years without any claim made by the lord, notwithstanding that, the lord might take and seize him or have a special writ of *nativo habendo* against the *villein*, directed unto the sheriff for his removal.* By the statute 25 Edward III, ch. 18, the lord might obtain possession of his *villein* in a more summary way than by resorting to the writ of *nativo habendo*, for that act gave him power to seize the person of his *villein*, and to allege *villenage* in any action which might be brought against him by the *villein*, although the latter had a writ *de libertate probanda* depending, which was adjourned before the Justices in Banco, or the Justices in Eyre.†

The lord might also under the statute of 1 Richard II, c. 2, have a writ to the Sheriff to assist him to distrain his *villeins*, which writ was as follows:—

“The King to the Sheriff, &c. We command thee that thou aidest A. of F., where he is not sufficient to distrein his *villeins* of N., to do him the custom and services due and accustomed. Witness, &c.”‡

If the King's *villeins* escaped out of the manor, a special writ was directed unto the Sheriff of the county to inquire by the oaths of honest and good men, the names of them, and where they abode, and to make them return and abide within the manor as before.§

Having shown the process by which the lord might seize or obtain possession of his *villein*, we shall proceed to point out the means which the law provided for the *villeins*' manumission. This might, to use the language of the author of “*Les Termes de la Ley*” be done in two sorts, viz., one was a manumission *expressed*, the other a manumission *implied*. The first, a manumission *expressed*, was when the lord made a deed to his *villein* to enfranchise him by the word *manumittere*, which was as much as to say, to let one go out of another man's hands or power. The manner of manumitting or making free in old time, most usually was this. The lord (in the presence of his neighbours) took the bondman by the head, saying, “I will that this man be free,” and therewith shoved him forward out of his hand, and by this he was free.|| But if two had a *villein*

* Fitz. Nat. Brev., 190 a. + Ibid 186 c. † Ibid 191 c.

§ Fitz. Nat. Brev. 191 e. || *Les Termes de la Ley*, tit. Manumission, p. 436.

in common, and one of them made a manumission, he should not be made free against both.* Scott, in his romance of *Ivanhoe*, gives the following interesting description of the manumission of the Swineherd Gurth, by his master, Cedric of Rotherwood.

“ ‘But uncle, (said the jester, addressing the Saxon) if you would indeed
 “ ‘pleasure me, I pray you to pardon my play-fellow Gurth, who stole a
 “ ‘week from your service to bestow it on your son.’ ‘Pardon him,’ ex-
 “ ‘claimed Cedric, ‘I will both pardon and reward him. Kneel down
 “ ‘Gurth.’ The swineherd was in an instant at his master’s feet. ‘*Theow*
 “ ‘and *Esne* art thou no longer,’ said Cedric, touching him with a wand.
 “ ‘*Folk free* and *sackeless* art thou in town and from town, in the forest as
 “ ‘in the fold ; a hide of land I give to thee in my steads of Walbringham,
 “ ‘from me and mine to thee and thine, aye and for ever ; and God’s mali-
 “ ‘son on his head who this gainsays.’ No longer a serf, but a freeman and
 “ ‘a landowner, Gurth sprung upon his feet, and twice bounded aloft to
 “ ‘almost his own height from the ground. ‘A smith and a file,’ he cried,
 “ ‘to do away the collar from the neck of a freeman !—Noble master ! double
 “ ‘is my strength by your gift, and doubly will I fight for you ! There is a
 “ ‘free spirit in my breast ; I am a man changed to myself and all around.
 “ ‘Ha, Fangs,’ he continued,—for that faithful cur, seeing his master thus
 “ ‘transported, began to jump upon him, to express his sympathy—‘knowest
 “ ‘thou thy master still ?’ ‘Ay,’ said Wamba, ‘Fangs and I still know thee,
 “ ‘Gurth, though we must needs abide by the collar ; it is only thou who
 “ ‘art likely to forget both us and thyself.’ ‘I shall forget myself indeed,
 “ ‘ere I forget thee, true comrade,” said Gurth ; “and were freedom fit for
 “ ‘thee, Wamba, the master would not let thee want it.’ ‘Nay,’ said
 “ ‘Wamba, ‘never think I envy thee, brother Gurth ; the serf sits by the
 “ ‘hall fire when the freeman must forth to the field’—and what saith Old-
 “ ‘helm of Malmsbury, ‘better a fool at a feast than a wise man at a fray.’”†

Implied manumission, or manumission without the word *manumittere*, was when the lord made an obligation to his *villein*, to pay him money at a certain day, or granted him an annuity, or leased land to him by deed for years or life, and in divers like cases the *villein* was thereby made free, for this was dealing with his *villein* on the footing of a freeman.‡ It was in some instances giving him an action against his lord, and in others vesting in him an ownership entirely inconsistent with his former state of bondage. So also if the lord brought an action of *debt* or *account*, or of *covenant*, or of *trespass*, or of such like against his *villein*, this enfranchised him ; for, as the lord might have a short remedy against his *villein*, by seizing his goods, (which was more than equivalent to any damages he

* Ibid, tit. Villein. p. 574. † Scott’s *Ivanhoe*, vol. 3, c. 2, p. 38.

‡ Les Termes de la Ley, tit. Manu., p. 436.

would recover,) the law, which is always ready to catch at anything in favor of liberty, presumed that by bringing this action he meant to set his *villein* on the same footing with himself, and therefore held it an *implied* manumission;* and it is commonly said three things are favored in law, viz., life, liberty and dower.† But if the lord sued his *villein* by appeal of felony, when he was indicted of the same before, this did *not* enfranchise the *villein* though the matter of appeal was found against the lord; for the lord could not have the *villein* to be hanged without such suit.‡ A *villein* also became *ipso facto* free, if he had remained a year and a day in any *privileged* town, and was *received* into their *gylda*, (or guild, as it has since been called,) as a citizen of the place.§ So, if the *villein* brought an action against his lord, and the lord *emparled*, or made a full defence *before* he made a protestation of the *villennage*, that was held to be an enfranchisement, though he made a protestation afterwards.||

Notwithstanding the law has ever been favorable to the liberty of the subject, it is probable that *villennage* would have existed in this country for a much longer period than it did, had not the power of the Romish Church been brought to bear on the hearts and consciences of those who held their fellows in bondage, for it is a remarkable fact, that no legislative enactment prior to the Stat. of 12 Charles II, c. 24 (by which *title* and *tenure* in *villennage* were *incidentally* abolished), was ever passed for the express liberation of the *villein* population.¶ Even *Magna Charta* itself, which either granted or secured very important privileges to those orders of the kingdom that were already possessed of freedom, viz., to the clergy, the barons and the gentry, was all but silent as to the serf, and left the inferior and greater part of the people still to be treated as slaves.** The Romish Church, however (to her honor be it spoken), became the advocate of the slave, and used all the influence which she then possessed with the laity for the manumission of the *villein*. And with such success were her efforts crowned, that *villennage* had nearly ceased to exist in the reign of king Edward VI. For Sir Thomas Smith (who was secretary to that monarch) testifies “that he never knew any *villein in gross* throughout the realm; and the few *villains regardant* that

* 2 Stew. Bl., c. 6, p. 94. + 1 Co. Litt., b. 2, c. 11, sec. 193.

† Litt. 208, 21 Vin. Abr. tit. Villein: p. 582, p. 5, 6.

§ Glanv: Lib. 5, c. 5, 1 Reeve's Hist. Eng. Law, c. 3, p. 100, 11 Mod. Rep. 189.

|| 21 Vin. Abr. tit. Vill. p. 583 (o.) 1, 5. ¶ Barrington on the Statutes, 301.

** Wright's Golds. Hist. Eng., c. 11, p. 90.

“were then remaining were such only as had belonged to bishops, monasteries, or other ecclesiastical corporations, in the preceding times of popery. For the holy fathers, monks and friars had, in their confessions, and especially in their extreme and deadly sickness, convinced the laity how dangerous a practice it was for one christian man to hold another in bondage; so that temporal men, by little and little, by reason of that terror in their consciences, were glad to manumit all their *villeins*.”* †

By the means to which we have adverted, *villenage* gradually ceased to exist in England. The last case of that nature (*Pigg v. Caley*) recorded in our courts of justice, occurred in the fifteenth year of the reign of king James I., in which an action of trespass was brought by P. against C. for taking his horse, &c., to which C. pleaded that he was seized of the manor of D., to which P. was a *villein regardant*, and that he and all those whose estate he had, had been seized of the plaintiff and his ancestors. The plaintiff replied that he was free, &c., *absque hoc*, that the defendant, &c., were seized of the plaintiff, &c., as of *villein regardant*; and the issue was found for the plaintiff. And upon motion in arrest of judgment, it was ruled that the traverse was well taken. And by Hubbard, if a man had not *seizin* of a *villein in gross* within six years, he should be barred by 32 H. VIII of limitations in *nativo habendo*: for liberty is favored; but yet of a *villein regardant*, the *seizin* of the manor to which, &c., was sufficient *seizin* of the *villein*.† Long, however, subsequent to the extinction of *villenage* it was thought that the owners of foreign or black slaves might legally hold them in bondage in this country; and the following curious advertisements, republished in ‘Notes and Queries,’ will in some degree tend to shew the feeling of the age on this subject, viz.: “A black boy of about 15 years of age, named John White, ran away from Col. Kirke on the 15th instant; he has a silver collar about his neck, upon which is the Colonel’s coat of arms and cipher; he has upon his throat a great scar; bare in habit. Whoever brings the aforesaid boy to Col. Kirke’s house, near the privy garden, will be well rewarded.” London Gazette, March, 1685.

* 2 Stew. Bl. Com., c. 6, p. 96.

† Some few *villeins regardant* appear to have been still existing on the domains of the Crown in the early part of the reign of Queen *Elizabeth*. Barrington on the Statutes, page 308, says, he found in Rymer a Commission of hers, in the year 1554, directed to Lord *Burghley* and Sir *Walter Mildmay*, for enquiring into the lands, tenements and other goods of all her *bondmen* and *bondwomen* in the counties of *Cornwall*, *Devon*, *Somerset* and *Gloucester*, such as were by *blood* in a *slavish* condition, by being born in any of her manors, and to compound with all or any such *bondmen* or *bondwomen* for their *manumission* and *freedom*.

‡ 21 Vin. Abr. tit. *villein*, p. 586, 13.

“To be sold, a negro boy, about 14 years old; warranted free from any distemper, and has had those fatal to that colour; has been used two years to all kinds of household work, and to wait at table. His price is £25, and would not be sold but the person he belongs to is leaving off business. Apply to the bar of the George Coffee House, in Chancery Lane, over against the Gate.” *London Advertiser*, 1756.

“Matthew Dyer, working goldsmith, at the Crown, in Duck Lane, Orchard Street, Westminster, apprentice and successor to Mr. John Redmam, corkscrew maker, deceased, continues the business of his late master in making all sorts of gold and silver corkscrews, tobacco stoppers, silver padlocks for *blacks* or dogs’ collars, silver clasp knives, &c., where merchants and shopkeepers may be supplied with any quantity, on the least notice and the lowest prices. An assortment of the above work kept by him.” *Ibid.*

Indeed, in the year 1729 both Sir Philip Yorke and Mr. Talbot, then attorney and solicitor-general, entertained the opinion that black or foreign slaves might not only be held in bondage here, but be compelled by their owners to return from the freedom of our isle to slavery abroad; and they both pledged themselves to the British planters upon a case submitted to them, for the legal consequences of bringing negro slaves into this kingdom, or their being baptised; which opinion was repeated and recognised by the former very eminent lawyer when Earl of Hardwicke, and sitting as Lord High Chancellor, on the 19th October, 1749, to the following effect—he said, “that *trover* would lie for a negro slave; that a notion prevailed that if a slave came into England, or became a Christian, he therefore became emancipated, but there was no foundation in law for such a notion. When he and Lord Talbot (he said) were attorney and solicitor-general, this notion of a slave becoming free by being baptised prevailed so strongly, that the planters industriously prevented their becoming Christians, upon which their opinion was taken. Upon the best consideration of the case, they were both clearly of opinion that a slave did not in the least alter his situation or state towards his master or owner, either by being christened or by coming to England. That although the statute of Charles II. had abolished *homage tenure*, so far that no man could be a *villein regardant*, yet if he would acknowledge himself a *villein engrossed* in any Court of Record, he knew of no way by which he could be entitled to his freedom without the consent of his master.”*

It is somewhat singular that two such distinguished men as Lords Talbot and Hardwicke should have held the opinion, so detrimental to liberty, expressed by them, for we find that it was decided in a case of *Smith v. Gould*, which came before the Court of B. R., in Michaelmas

* *Elmes' Clarkson*, c. 1, p. 35.

Term, in the 4th of Queen Anne (1706), that *trover* would not lie for a negro. In that case, an action of *trover* was brought for several things, and among the rest, *de uno Ethiopâ (vocat. a negro)*, and on not guilty pleaded, a verdict was found for the plaintiff, and several damages, and as to the negro £30; and it was moved in arrest of judgment that *trover* lay not for a negro, for that the owner had not an absolute property in him—he could not kill him as he could an ox. On the *contrary*, it was said, a property implies the right of having, and enjoying, and disposing, but it does not always imply a power to destroy; that this power holds in beasts, fowl, and fish, which were made the property of mankind by the act of God, and have a natural existence, but not in things incorporeal, which consist in *jure tantum*, for this being a property *ex instituto* only, the owner has only a power according to the measure of this instituted right. And it was instanced in the case of a common, a way, and a ward. On a *ca. sa.* the plaintiff has an interest in the body of the prisoner as a pledge, not to sell, but to keep, and it goes to executors. Hob. 61. In a servant to work him, in a captive to sell him. Reg. 102, F. N. Br. 88 a. B. N. C. 295, Bro. Property 38, 1 H. VI., c. 5, in Rast. 219, Cott. Ab. 460. That the writ *nativo habendo* must lay the *explees* of a *villein* in working and taxing him at will. Co. Ent. 406. That by the law of Moses a man may be a slave, and a slave was a chattel, his master's money. Exod. xx. 21. That by the same reason there may be a *servus prædialis*, i.e., a *villein*. One may be a *servus personalis*, and that first a captive, and afterwards a *villein*. Hob. 97.; Brownl. 78. A *villein in gross* is a chattel, for he is of a perishable nature, and cannot endure for ever. So is Fitz. Discontinuance 16, Br. Villein 60. As *villeins* are *regardant* to land, it is a different thing, and in that respect they are inheritances, and so are the charters. Every *villein* is intended in law *regardant*, the writ in the register therefore supposes him to be *nativum suum*, but before he was a *villein*, he was a captive, and then a chattel. Lastly, it was insisted, that the court ought to take notice that they were merchandise, and cited 2 Cro. 262. The case of Monkeys, 2 Lev. 201, 3 Keb. 785, 1 Inst. 112. If I imprison my negro, a *habeas corpus* will not lie to deliver him, for by Magna Charta he must be *liber homo*. 2 Inst. 45. *Sed curia contra*, men may be the owners, and therefore cannot be the subject of property. Villenage arose from captivity, and a man may have trespass *quare captivum suum cepit*, but cannot have *trover de gallico suo*. And the court seemed to think

that in trespass *quare captivum suum cepit*, the plaintiff might give in evidence that the party was his negro, and he bought him.*

Previous, however, to the decision of the last-mentioned case, it was adjudged by the Court of B. R., in the case of *Chamberlain v. Harvey*, which was heard in Trinity term, 7 William III. (1696), that an action of trespass would not lie for taking away a negro.

In this case an action of trespass was brought against the defendant for taking and carrying away an Ethiopian (*Anglice vocat.* a negro) of the value of £100, and keeping the plaintiff out of possession of him, so that the plaintiff lost the use of the said negro. Upon not guilty pleaded, the jury gave a special verdict, by which they found that the negro had been baptised after the taking, and the matter was argued upon that point, viz., whether the baptism was a *manumission*, and as to that the court gave no opinion, but said “an action of trespass would not lie, because a negro “could not be demanded as a chattel, neither could his price be recovered in “damages in an action of trespass, as in case of a chattel; for he was no “other than a slavish servant, and the master could maintain no other “action of trespass for taking his servant, but only such which concluded “*per quod servitum amisit*, in which the master should recover for the loss “of his service, and not for the value, or for any damages done to the “servant.”†

Notwithstanding the adverse decision of Lord Hardwicke, the question was again mooted in the King's Bench, Trinity Term, 1772, in the case of James Somersett, a negro, against his former master, Charles Stewart, Esq., upon the return of a *habeas corpus*, which suit was promoted by that eminent philanthropist, the late Granville Sharpe, Esq., and on the 22nd day of June in that year, Lord Mansfield, C.J., pronounced the unanimous sentiments of the whole bench. His lordship first stated the return, and then spoke to the following purport. “We pay due attention to the “opinions of Sir Philip Yorke and Mr. Talbot, in the year 1729,” (which his Lordship quoted at length without the least comment, and added) “We “feel the force of the inconvenience and consequence that will follow the “decision of this question, yet all of us are so clearly of one opinion upon “the only question before us, that we think we ought to give judgment “without adjourning the matter to be argued before the Judges, as is “usual in the *habeas corpus*, and as we at first intimated an intention of “doing in this case. The only question then is, is the cause returned suffi- “cient for remanding him? If not, he must be discharged. The cause re- “turned is, that the slave absented himself, and departed from his master's

* 2 Salk. Rep. 666 (2).

+ Carth. Rep. 396.

“service, and refused to return and serve him during his stay in England. Whereupon by his master’s orders he was put on board the ship by force, and there detained, in secure custody, to be carried out of the kingdom and sold. So high an act of dominion must derive its authority, if any such it has, from the law of the kingdom wherein it was executed. A Foreigner cannot be imprisoned here on the authority of any law existing in his own country. The power of a master over his servant is different in all countries, more or less limited or extensive. The exercise of it therefore must always be regulated by the laws of the place where exercised. The state of slavery is of such a nature that it is incapable of being now introduced by courts of justice upon mere reasoning, or by inferences drawn from any principles, natural or political. It must take its rise from positive law, the origin of it can in no country or age be traced back to any other source. Immemorial usage preserves the memory of positive law long after all traces of the occasion, reason, authority, and time, of its introduction are lost, and in a case so odious as the condition of slaves, it must be taken strictly: tracing the subject to natural principles the claim of slavery can never be supported. The power claimed by this return was never in use here, nor acknowledged by the law. No master was ever allowed here to take a slave by force to be sold abroad, because he had deserted from his service, or for any other reason whatever. We cannot say that the cause set forth by this return is allowed or approved of by the laws of this kingdom, and therefore the man must be discharged.”*

By this decision, it became our “pride and boast,” that

“Slaves cannot breathe in England, if their lungs
 “Receive our air, that moment they are free;
 “They touch our country, and their shackles fall—
 “That’s noble, and bespeaks a nation proud
 “And jealous of the blessing.”†

Before concluding, it may be remarked that the *copyhold tenures* of the present day are the remains of *villenage*. That the *villein* class formed no small part of the population of the country, we may infer from the language of Sir Edward Coke, (in the case of *Bagnall v. Tucker*, 2, Brownlow), where he is reported to have said that a *third* part of the kingdom was *copyhold*. The tenure by which *villeins* held their lands was that of pure *villenage*; the services were base and uncertain, and as they might be dispossessed at any time, they were said to hold “*at the will of the lord*.” The acquiescence, however, of lords of manors to their *villeins* holding their lands, so long as they performed their services, and their permission to their children to succeed them, advanced the pretensions of the *villeins* in opposition to the right of the lords, and gave them a kind of presumptive or customary right to their possession, which in time was taken notice of by courts

* Elmes’ Clarkson, p. 37.

† Cowper.

of justice, and under their sanction became at length a part of the common law. In proof of this we cannot do better than quote the language of the late lord Wynford, when Chief Justice of the Common Pleas. "It is to lawyers in Westminster Hall, and I speak it with pride, that *slaves*, (for such was the state of *men* in pure *villenage*), are indebted for the permanency of their property, and for that right in society which permanency in property has conferred upon them. It is by the establishment of customs referable to *copyholds* as established in courts of justice that this permanent interest has placed *copyholders* in the happy situation in which they are now found. The *copyholder* now has a present interest in his estate so long as he performs his services, and the Lords have certain rights and dues, and so long as the *copyholder* performs his services, and pays the dues, he has the same permanent interest in his estate as if it were freehold."*

And now, having endeavoured to prove the existence of *slavery* during the Saxon era, and the substitution of *villenage* after the conquest, and also to trace the *latter* until it became extinct under the benevolent influence of the christian religion, allow us to express a hope that the subject has not been altogether devoid of interest. The discussion of it may have tended, in some degree, to divest the mind of many erroneous ideas, as it has shown us that our country has not always been (what we had fondly, or perhaps we may say, somewhat vainly hoped), "the land of the brave and the *free*," but has established a period in her history when

"Shivering wretches at the curfew's sound,
 "Dejected, shrunk into their sordid beds,
 "And, through the mournful gloom of ancient times,
 "Mused sad, or dreamt of better."†

Happily, however, those days of outrage and misrule have gone by, and our lot has been cast in a milder and more glorious age, when the bright shield of freedom alike protects the cot of the peasant, and the palace of the prince. The whole world, with the exception of a portion of the United States of America, and a few other nations, has, following the example of Great Britain, given manumission to the slave. From the directing sceptre to the obedient spade, our great and glorious country hath proclaimed freedom to her children, who now live under "laws by which," as Lord Bacon says, "the king has the justest prerogative, and the people the best liberty."

* 1 Scriv. Cop. 43.

† Thom. Poem Lib. part 4, p. 282.

ON THE SOLAR ECLIPSE OF MARCH 15TH, 1858, AS SEEN AT BURNLEY.

By T. T. Wilkinson, F.R.A.S.

(READ 18TH MARCH, 1858.)

Since this locality appears to have been peculiarly favoured with regard to opportunities for observing the eclipse, perhaps the following notes may not be unacceptable to the society,

1. At the time of commencement here the sky was totally obscured, and no hope existed that the eclipse would be seen at any period of its duration.

2. Shortly before twelve o'clock, however, the stratum of clouds began to appear less dense, and at five minutes past twelve the disc of the sun became distinctly visible through the haze.

3. After an interval of fifteen minutes, several openings were formed through the clouds, and an opportunity was afforded of observing the colour of the sky. This at first seemed to be somewhat of a dark purple hue, but it shortly changed into what an artist would call a dirty grey. This was most evident around the edges of the openings, whilst the centre of each exhibited a near approach to a deep black, and seemed to project forward from the rest of the opening.

4. At twenty-five minutes past twelve the clouds almost cleared away from the vicinity of the sun, and for about ten minutes the eclipse was observed at the greatest advantage. A deep gloom gradually settled upon the face of nature, and at the period of greatest obscuration it resembled the evening twilight, when the sun has disappeared behind a thick bank of clouds. The sparrows forsook their usual haunts, and even the poultry ceased to seek for food.

5. From this time to near the close the scudding haze occasionally obscured the sun; but at rapid intervals the progress of the eclipse could be observed without much inconvenience. Indeed, the hazy clouds served as a medium through which the sun could be seen without the use of smoked or coloured glasses; for it was only when these were absent that

glasses became necessary. Many persons observed the eclipse most effectually by turning their backs upon the sun and noting his phases as reflected from the apparently dark windows of our shops.

6. When dense rainy clouds passed the sun a curious phenomenon always took place. No sooner did their highly-charged edges appear to touch the sun's disc than the bright crescent instantly became magnified to three or four times its real breadth; the dark body of the moon appeared to start back, and a flood of light was immediately dispersed through the atmosphere, which for the time almost dispelled the prevailing gloom. The thin margins of the clouds evidently acted the part of a reflector, and the sudden changes from dim twilight to almost bright day were at once remarkable and beautiful in the extreme.

7. At the instant of greatest obscuration, the sun was hidden from view by a dense mass of passing clouds; but a few minutes after they cleared away and showed that the crescent of light had changed from south-east to south-west. An appearance resembling Baily's beads was visible at the extremities of the cusps on several occasions, but these appearances were probably magnified by the watery state of the atmosphere. A slight shower of rain had just fallen, and the black inky appearance of the water on the tops of the houses was very extraordinary. This, together with the partial absence of light, produced a sensation of chilliness which would probably not have been felt so sensibly had one of the exciting causes been absent.

8. No difficulty was experienced in reading ordinary print at the usual distances at any time during the eclipse, but placards on the walls became indistinct at a distance of twenty or thirty yards, just as in the evening twilight.

9. At thirty-eight minutes past one the sun became again totally obscured by dense clouds, and no further observations could be made. Heavy rain fell during most of the afternoon, and the end of the eclipse could only be inferred from the presence of the usual amount of light and heat.

ON THE SOLAR ECLIPSE OF MARCH 15TH, 1858, AS SEEN
NEAR OXFORD.

By J. T. Towson, F.R.G.S., and
T. Sansom, A.L.S.

(READ 18TH MARCH, 1858.)

The station selected for viewing the eclipse on Monday last, was the open ground at the northernmost part of Blenheim Park, Oxford. The morning was moderately bright until forty-five minutes past ten o'clock, when light clouds began to pass over the face of the sun. These gradually increased, and about the period of the first contact the sun was frequently obscured for intervals of a few seconds. At thirty-five minutes one second past eleven all eyes were directed towards the sun. A small telescope of one-and-a-half inch aperture had been previously fixed in position, and with this instrument the first contact was observed to take place at forty minutes fifty-seven seconds past eleven, Greenwich mean time, but it was at least a minute later before it was observable with the unassisted eye. The eclipse now increased rapidly, and by fifty minutes fifty-nine seconds past eleven it had made considerable progress. From fifty-six minutes past eleven the sun was overshadowed with clouds for a period of about five minutes, and we only caught occasional glimpses as the clouds rapidly passed over its face. At fifty-seven minutes past eleven it was seen, and at about nine minutes after twelve it was visible for some time, being only partially obscured by light and fleecy clouds, and at twelve minutes fifty-five seconds past twelve we obtained an excellent view of the sun. At this period the spots on its surface were very distinct. Several dark clouds now intercepted our view, and we almost despaired of seeing it again, but from thirty-four to thirty-eight minutes past twelve very good views were obtained. Heavy clouds still continued to roll on, and we were unable to make any further observations, the sun remaining entirely obscured until after the eclipse was over.

Towards the approach of the greatest obscuration, a very sensible darkness was observed, also great chilliness; the darkness appeared to steal upon us with the rapidity of twilight in the mountainous valleys of Wales and Scotland. Distant objects appeared dim, while those in the immediate neighbourhood were perfectly distinct. At the darkest period the smallest print could be read with great ease. It was calculated that the greatest obscuration would commence at fifty-nine minutes one second past twelve, and terminate at fifty-nine minutes eleven seconds past twelve, and there can be no doubt this calculation was correct, for immediately after that time the light increased with the greatest rapidity, imparting a genial warmth and cheerfulness to the landscape and all around us. This sudden and rapid increase for the first five minutes was most remarkable, and to us unnatural. It appeared to roll from the south-west horizon rather than come from the heavens, and the light seemed to flicker or tremble into existence. This unsteadiness was only noticed for the first few minutes after the annulus had passed.

In the park, large herds of deer were feeding; but about a quarter to one o'clock they commenced to herd together, as usual at sunset, retreating rapidly across the park towards their night quarters. This they had nearly accomplished by the time of the greatest obscuration, but immediately after the light began to increase they returned to their feeding ground. Near where we were standing was a rookery, and most of the rooks had retired to roost by the time of the greatest darkness. Mr. Towson and others, on returning to the railway station about three o'clock in the afternoon observed, in a rookery near Woodstock, many of the birds still at roost with their heads under their wings.

We were greatly assisted by our friend Mr. Edward Moore, B.A., of Pembroke College, Oxford, who accompanied the members of the Historic Society to Blenheim. His observations with the thermometer were carefully made, and are of great value, as showing differentially the state of the temperature. They were made with a dry bulb thermometer, suspended about three feet above the ground, in the open air.

HOOR.	STATE OF TEMPERATURE.
At 11h. 40m. 16s.	52.5
At 0h. 9m.	51.0

STATE OF
TEMPERATURE.

HOUR.	
At 0h. 16m.	51.0
At 0h. 35m.	50.5
At 0h. 50m.	49.5
At 0h. 58m.	49.0
At 1h. 1m.	48.2
At 1h. 20m.	49.0
At 1h. 30m.	49.5
At 1h. 40m.	50.0
At 1h. 50m.	50.5
At 1h. 55m.	51.3

In the *Times* of Tuesday, a letter appeared from Mr. John Yeates, containing observations made at Fotheringay Castle Mound, Northamptonshire, in which he states that a considerable change in the magnetic declination took place: although not anticipating such a phenomenon, arrangements were made by Mr. Towson which would have detected any such change in the variation of the needle, had it taken place. In order to direct to where Jupiter and other heavenly bodies were to be looked for, pairs of staves were placed in such positions as to direct the eye of the observer to the various points in the heavens where they would appear at the time of the greatest obscuration. For this purpose a compass was fixed on a tripod; and as the wind was blowing, frequent reference was made to the compass during the progress of the eclipse, to observe that no disturbance of the sticks had taken place, and up to the time of within a few minutes before the greatest obscuration, when one of our party unfortunately removed the compass, the staves intended to direct the eye to Jupiter continued to bear by the compass S. 29 E., and the needle had not shifted on the card.

Since these observations were written we have received a most interesting letter from Mr. Moore, and as it contains some very valuable information we take the liberty of reading it to the society:—

“Pembroke College, March 16th, 1858.

“My dear Mr. Sansom,—Having made several enquiries yesterday from various observing parties about the eclipse, and attended a special meeting of the Ashmolean Society held on the subject, I lose no time in

sending you a few particulars which I think may be interesting to you. We may congratulate ourselves on seeing far more of it than many in this neighbourhood. The best view of all was obtained on the bridge in Woodstock Park. One of the observers at the Observatory has just told me that some friends of his saw the annulus surrounded with a corona of light, with brighter rays darting out from it in several places. This is the only case in which any one professes to have seen it, and as you see, the information is but second hand.

“As regards the temperature, I think you will consider the inclosed diagram presents a very interesting and remarkable result. Professor Phillips very kindly allowed me to take it away after it had been exhibited to the meeting, and I was thus able to copy it at leisure and with considerable accuracy at home. The three thermometers, he stated, coincided exactly at the moment of greatest obscuration. The total variation of his clear bulb thermometer, 51.5 to 47.4 (as nearly as I can judge), coincides exactly enough with ours (52.5 to 48.3), which is interesting. From thirty to forty-five minutes past eleven there were gleams of sunshine, which caused slight irregularities in the fall of the mercury, and after fifteen minutes past two a fall of rain rendered the remaining observations useless. I told Professor Phillips the principal purpose for which I wished a copy of his observations, and he requested that if you made any use of them you would say that they were planned and executed by him and Professor Walker conjointly. I should have said that Professor Phillips' expedition was at Somerton, about a mile beyond Heyford, on the central line. As regards amount of light, some photographic paper was exhibited, different parts of which were successively uncovered at intervals of fifteen minutes (I think), in which the central part was very slightly tinted indeed, and presented a most marked contrast to the surrounding portions. I enclose some observations read out upon the amount of light, which you may find it interesting to compare with ours. Two things every single observer was particularly struck with wherever they were situated: (1), That the darkness at the maximum came on by jerks or jumps, as Professor Phillips described it; and (2) that the return of light was apparently much more rapid than the loss of it. The former was not explained; the latter was suggested to have been the result of the greater sensitiveness of the iris of the eye. I dare say you remember the same fact being observed by all of

us. The spots on the sun were observed yesterday with the naked eye, and I myself saw them this morning (of course with the help of smoked glass).

* * * *

“Yours very truly, EDWARD MOORE.”

OBSERVATIONS OF PROFESSORS PHILLIPS AND WALKER AT HEYFORD,
REDUCED FROM THE TABULAR FORM REFERRED TO IN
MR. MOORE'S LETTER.

Hour.	No. 1.	No. 2.	No. 3.
11½	58.0	51.5	49.0
11¾	55.0	50.0	48.9
12	54.5	49.5	48.5
12¼	52.0	49.0	48.3
12½	50.0	48.6	48.1
12¾	49.3	48.5	48.0
1	47.4	47.4	47.4
1¼	48.0	47.5	47.5
1½	48.7	47.9	47.6
1¾	51.0	49.5	48.0
2	51.6	49.9	48.2
2¼	52.2	50.5	49.0

N.B.—No. 1, Professor Phillips's radiating thermometer (in the sun) —No. 2, Professor Phillips's white bulb thermometer (in the sun).—No. 3, Professor Walker's minimum thermometer (in the shade).

DIMINUTION OF LIGHT OBSERVED BY CAPTAIN BURROWES FROM THE TOP OF
THE OBSERVATORY.

0h. 4m. Change perceptible.
0h. 44m. Clouds more lowering.
0h. 54m. Some distant objects became invisible; loss of light very perceptible.
0h. 57m. Darkness that of first dawn.
0h. 58m. Sudden darkening.
0h. 59m. Lighter again; light increasing rapidly.

Another observer (at Somerton) stated the darkness at the maximum to

be exactly equal to that at five minutes past six, p.m., yesterday. He also remarked the disappearance of some distant objects.

NOTE.—It is interesting to observe that on our return from Oxford we met at Birmingham the Rev. Spencer Percival Mansel, of Shrewsbury, and his son; they were stationed on the railway bridge at Woodstock, and, by the aid of a good binocular telescope, were fortunate enough to obtain for a few seconds only, a view of the perfect annulus. This is the only instance, as far as we know, of its having been seen.

ICEBERGS IN THE SOUTHERN OCEAN.

By J. T. Towson, F.R.G.S.

(READ 19TH NOVEMBER, 1857.)

Having during the last ten years directed a very considerable amount of attention to the subject of shortening the time occupied in voyages to and from Australia, I have taken a very great interest in every matter calculated to affect the risk attendant on these voyages. It was well-known that the Southern ocean was sometimes visited by icebergs, but this fact was not regarded as considerably increasing the danger of navigating these seas. Nor did I meet with any complaint that the new route I had aided in tracing out was more encumbered with icebergs than the old track, until the latter months of 1854, six years after the new route was adopted. During the months of November and December, 1854, and the first four months of 1855, very alarming accounts were forwarded to me of ice impediments, both on the outward and homeward passage. Naturally I felt especially called on to obtain all the information in my power, and to place it before the practical mariner in the form best suited to aid him in providing for the safety of his ship. Since this matter was one that would admit of no unnecessary delay, as early as May, 1855, I read, before the Liverpool Literary and Philosophical Society, the results of my investigation, and printed and circulated them widely amongst the masters commanding ships bound for Australia. On that occasion I not only pointed out the region especially dangerous from ice, but I requested of ship-masters the favour of returning to me accounts of all the ice they met with in the Austral seas. This request has been responded to in a spirit as creditable to the ship-masters of Liverpool as it has been flattering to myself. It is rather surprising that, after three years' investigation, I have so little, calculated to be of practical value, to add to the remarks previously published, although the data have been exceedingly extended. I have to acknowledge the aid afforded me by the records of several American gentlemen connected with the Seal trade of New South Shetland; of Luit. J. Van Gogh, Director of the Marine Department of the Royal Netherland Meteoro-

logical Institute; and of officials of our own Government, as well as those of the captains of Australian vessels to whom my appeal was addressed. Further, I have to acknowledge the services of several passengers, who have furnished me with sketches of icebergs, and the kindness of a lady-passenger on a homeward voyage of the "*Lightning*," in drawing for me a beautiful sketch of an extraordinary iceberg, 420 feet high; this is also admirable as a work of art. I have also availed myself of information afforded in the published journals of Captains Cook and Furneaux, and other officers engaged in voyages of discovery, by which means I have been enabled to carry back my investigation to 1772.

Ice of the Polar Seas may be divided into two classes—sheet ice and icebergs. These are quite distinct in their origin. Sheet ice is met with in different forms, which, however, are but various conditions of ice arising from a common origin,—in fact, the same ice is found at different times, under all the varied forms of ice-fields, ice-floes, pack, stream, drift and brash ice. All these are the result of one year's frost, and the extent and depth of sheet ice depend generally on the intensity of the previous winter's cold, and the circumstances connected with the succeeding season, which regulate the breaking up of the frozen surface. The return of the milder season gradually separates the ice into enormous fields, which are cast adrift on the ocean. Some of these in the Arctic region have been known to have an area of more than one hundred square miles. They vary from three to thirty feet in thickness. When broken into smaller sheets they are termed floes. When reduced to fragments crowded together they form what is termed pack ice; this, when elongated, is called a stream; and when further separated, it is known by the names of drift and brash ice,—the latter term being applied when the pieces have been ground down by abrasion, or have lost all the characteristics of their original condition by the thawing action of a milder climate. Icebergs, however, differ altogether both in appearance and origin from the kinds of ice already described. Towering like precipices and pinnacles, varying from one hundred to a thousand feet above the surface of the sea, in some directions they assume the appearance of chalk cliffs, but near the edges of a fracture they exhibit in the sun a translucent appearance of emerald green. Between the spires and ridges at their summits are pools, and in some cases we may term them lakes, of azure blue. Icebergs are not the produce of one season; on the contrary, there is reason to believe that these masses commenced their

formation at a period equally remote with that of the origin of some of our tertiary rocks.* They are of the same nature as the glaciers of the warmer regions of the earth ; but instead of being melted in the valleys, they are pressed forward into the ocean till at length the water is sufficient to float them, and immense blocks are broken off. This process has been termed by the Greenland whale fishermen, the “ calving ” of an iceberg.

Drift ice, and all the other varieties of field ice, not only have a more recent origin, but they are of a less enduring character when drifted into the warmer climates. When carefully examined they are found to consist of crystals of ice and crystals of marine salts, aggregated together, the salt being separated from the water by the process of freezing. It is a well-known fact, that when small particles of ice and salt are mingled together, they will dissolve at a much lower temperature than that at which ice will dissolve ; consequently icebergs are found at a much lower latitude than drift ice. Generally drift ice is not to be met with in the southern oceans at a lower latitude than 58° , and, in that region, only in the Austral winter months from April to September inclusive. In one region, to which I shall more particularly refer, it has been found as low as 55° , and in some cases brash ice has been reported in lower latitudes. But in these last instances, from the numerous icebergs adjacent, and from the very irregular sizes and forms of the ice, I am inclined to believe that it consisted of the debris of icebergs, and was not brash ice properly so called.†

In the northern hemisphere, icebergs do not appear to attain the dimen-

* In the northern hemisphere they have their principal birthplace on the coast of Spitzbergen and the eastern shores of Greenland. The Altai mountain range gives rise to glaciers similar to those of Switzerland. But the cold of Siberia is not sufficiently intense to allow these glaciers to become icebergs. There they are gradually dissolved by the summer's sun, and feed with their waters the rivers Kutania and Lena. Still, however, immense blocks of ice are brought down from the glaciers to the coast by these rivers ; although they cannot be denominated icebergs, they possess a common origin. In 1799 a Tungusian discovered in one of them the body of a Mammoth, an extinct species of mammal, the fossil remains of which are found in the deposits of the Pliocene period of Lyell. Now since it is a law that the progress of glaciers is slow in proportion to the low temperature of the climate, we cannot imagine that icebergs of the south owe their origin to a more recent period than block ice on the Siberian rivers ; consequently we may regard them as possessing a preadamite existence.

† The only report of an ice field in the Southern Hemisphere that I have received was that of one that was seen in the month of September, 1854, in lat. 58° S., long. 56° W.

sions of those of the southern regions. Three hundred feet high is the greatest elevation reported in which we can place reliance. In the southern hemisphere icebergs are reported of heights surpassing the limits of credibility. There are others reported by gentlemen on whose observations we can place implicit dependence, of heights far surpassing those of the northern seas.*

The one already alluded to as sighted by the "Lightning" on the 10th of September, 1856, in lat. $55^{\circ} 33'$ S., long. 140° W., was 420 feet high; and one of our most celebrated and talented naval surveyors informed me that he had seen icebergs in southern regions 800 feet high. The "Generaal Baron von Geen," August 6th, 1840, passed an iceberg 1000 feet high. The "Agneta," on the 23rd of March, 1855, passed an iceberg 960 feet high, in lat. $53^{\circ} 14'$ S., long. $14^{\circ} 41'$ E.

In horizontal dimensions, however, the icebergs of the south exceed those of the north to a greater extent than in elevation. It is only in the southern ocean that the existence of icebergs of miles in circumference is recorded. In September, 1840, an iceberg was seen in lat. 41° S., long. 14° E., a mile in circumference. In January, 1858, in lat. $53^{\circ} 30'$ S., long. 51° W., an iceberg three miles long was observed. But these appear insignificant when compared with a body of ice reported to have been passed by twenty-one ships during the five months of December, 1854, and January, February, March and April, 1855, floating from lat. 44° S., long. 28° W., to lat. 40° S., long. 20° W. This mass has received the various denominations of an immense iceberg, an ice-island, "groote ijseiland," and a connected mass of icebergs. Its elevation in no case exceeded 300 feet; but its horizontal dimensions were sixty miles by forty. It was of the form of a hook, the longer shank of which was sixty miles, the shorter forty miles, and embayed between these mountains of ice was a space of water forty miles across. The first account of it was received from the "Great Britain," which, in December, 1854, was reported to have steamed fifty miles along the outer side of the longer shank. This longest range of ice then bore N.E. and S.W., the bay before alluded to, being open to the N.E. Whilst in this position it exposed ships to but little danger, since the bay could only be entered on the

* Dr. Darwin in 1796 noticed the extraordinary size of the icebergs of the southern ocean.

opposite course to that of ships on their homeward passage from Australia. But during the next three months it swung round 90° to the left, and drifted E.N.E. about 100 miles, which brought it very near to the route of outward bound ships, with the bay open to their track. We can scarcely imagine any mass of ice in an equally dangerous form, and I regret to add that one emigrant ship, the "Guiding Star," was embayed and lost on it with all hands. The "Cambridge" and "Salem" were also embayed in March and April, 1855, but through the skill of their commanders they were extricated from the most perilous situation in which we can conceive a ship to be placed by ice in any form. In 1856 I had the opportunity of taking the opinion of the late Dr. Scoresby on the nature of this mass, laying before him the numerous reports I had received concerning it. He believed that it consisted of an immense number of icebergs, that had been drawn together, by some of them having grounded in the track of others, and became afterwards united by the frost of successive centuries; till at length, by some convulsion or otherwise, the whole mass was set adrift. Dr. Scoresby was a very high authority on this subject, and I place great confidence in his opinion. Beyond doubt this was an extraordinary phenomenon, there being no record of any other mass of ice bearing even approximate horizontal proportions to those now described.

In tracing this and other remarkable masses of ice, I have been able to determine the direction of their drift, and their rate of progress. With the exception of one locality, the course of an iceberg is E. by N., rate ten miles per diem. The only exception is, after it has passed to the eastward of the Horn, when its course bends to the N.E., veering round to the east as it approaches the lat. of 40° S., on which parallel from the meridian of 25° W. to 15° W. its progress is scarcely one mile daily, in direction nearly east. This course is afterwards bent towards the south, crossing the meridian of Greenwich on the S.E. rhumb. I have been unable to determine whether it again changes its course to E. by N. or returns by a vortical current to the neighbourhood of the Horn. There are facts tending to support both of these hypotheses; but since near the meridian of Greenwich few ships go higher than lat. 50° S. we have not a sufficient number of observations to enable me to decide this question.

If, however, an iceberg happens to be carried to the left of the shaded line on the chart, situated between 50° S. 50° W. and 41° S. 30° W. it

continues its south-east course after it passes the fortieth parallel, and is carried towards the Cape of Good Hope. Thus in January, 1850, an iceberg was within sight of the Cape. In April, 1828, and in August, September and October, 1840, there were several icebergs in this locality.

From the consideration of these facts we draw the following practical conclusions :—

First. That the period comprising the months of November and December, 1854, and January, February, March and April, 1855, was a most extraordinary season for icebergs.* In every part of the southern hemisphere south of the fortieth parallel, the number of icebergs met with during these six months was beyond all recorded precedent. We had during that period a far greater number reported than the total of every other season from the time of Captain Cook down to the present year.† Whether such phenomena are periodical, or that of 1854-55 is an exceptional one, we cannot decide ; but from the reports of those who have been engaged in the seal trade, we believe that for fifty years previously there had been no season bearing the least comparison with the one under consideration. It has been observed that meteorological cycles exist in the southern hemisphere. If there exists a cycle in which such seasons return, the period must be secular. One individual cannot therefore determine this point. Under this impression I beg to record the result of my investigations in the Transactions of this Society ; it being one of the advantages of Scientific Societies that they can undertake to carry on investigations which require a period for their completion beyond that of the life of any individual.

Secondly. On the outward passage, from the meridian of the Cape of Good Hope to Australia, there is no parallel that possesses an immunity from icebergs. In one year the greatest number is met with on one parallel ; in another year on a different one. We cannot regard it as a general rule in this region, that the average number is greater in the

* On the accompanying chart and catalogue we have distinguished the ice of this period by figures, the ice of other periods by letters.

+ Since reading this paper I have received accounts of the ice sighted in the months of January, February and March, 1858. Although this season bears no comparison with that of 1855, the number of icebergs already reported greatly exceeds the average. In printing this paper it has been thought proper to extend it so as to include all reports received up to the time of going to press.

higher than in the lower latitudes, till we attain the parallel of 52° S., above which the danger is considerably increased. In seasons when icebergs are numerous, no outward bound ship has adopted a maximum latitude higher than 52° S. without meeting with a greater number than that sighted by those who have sailed on the lower parallels. We therefore recommend on this ground as well as others previously discussed that 51° S. should be the maximum latitude in voyages to Australia. The parallel of 53° S. is also dangerous on account of the islands and rocks which were discovered by Captain M'Donald of the "Oriental," in November, 1853, and known by the name of M'Donald's Islands,* the westernmost being situated about $52^{\circ} 50'$ S., and $73^{\circ} 50'$ E.; the easternmost $53^{\circ} 20'$ S. and $74^{\circ} 20'$ E.

Thirdly. That on the homeward passage to the meridian of 80° W., a greater number of icebergs are met with in the lower than in the higher latitudes. Thus, in November, 1854, the "Great Britain" passed two hundred and eighty icebergs in latitude 56° S., between the meridians of 112° W. and 92° W., independently of numerous icebergs in other localities. On the other hand, the "Golden Era" passed these meridians at the extraordinary latitude of 63° S., without meeting with an iceberg. It was not until she arrived at 72° W. that any inconvenience was experienced from ice, when she was surrounded by pack ice, in which she narrowly escaped being wrecked. The isothermal line of latitude 51° S. and longitude 40° E. † appears to pass through latitude 61° S. in longitude 140° W., consequently a much higher maximum latitude may be adopted for the homeward passage. But, from June to December inclusive, the parallel of 57° S. should be preferred, since in most cases those who have adopted the higher parallel have been either impeded or endangered by pack ice.

Fourthly. That by far the greatest number of icebergs is met with in

* About three years subsequently to the discovery of these islands and rocks they were reported as being discovered by the Captain of a ship engaged in the seal trade, belonging to the United States of America, although they had previously been reported by the Captains of several English ships, and were at the time laid down in the Admiralty Charts.

† This hypothesis must only be regarded as being founded on the very limited number of observations that have been brought under my notice. We must await the returns of the Meteorological Department of the Board of Trade for several years before we can regard this important fact as established or otherwise.

the Southern Hemisphere during the six months of November, December, January, February, March and April. I have not the record of a single iceberg having been sighted in the midwinter months of June and July, and they have been seldom reported in the months of May and August.

Fifthly. Eastward of the Horn there is a space bordering on both the outward and homeward track, which may be regarded as dangerous from ice. In the accompanying chart this region is distinguished by being surrounded by shaded lines and in the subjoined catalogue all ice that has been reported within its limits is distinguished by an asterisk.(*). From November, 1854, to April, 1855, this part of the Southern Ocean was so crowded with ice that no ship entered it without incurring serious risk; and generally we have more reports of ice in this area than in any other region of the Southern Hemisphere, although, in consequence of a caution extensively circulated, most Australian ships avoid entering this locality. It was here that the "Golden Era" was entangled in September, 1854; in August of the same year the "Red Jacket" lost four days amongst the ice in this region; in the same locality the "Champion of the Seas" spoiled her homeward passage in March, 1855; in the same month the "Guiding Star" was lost with all hands, on her outward passage, and we have before observed that it was amongst the same ice that the "Cambridge" and "Salem" incurred very serious risk. Under these circumstances, I have hesitated whether it might not have been desirable to modify the outward composite track now generally adopted, by delaying to cross the fortieth parallel till the longitude of 10° E. is attained. If it were not from the belief that the season 1854-1855 was an exceptional one, I should have certainly exerted my influence thus to have altered the outward composite route, although by so doing less favourable currents would be obtained, and there would be a greater risk of encountering unfavourable winds. Since April, 1855, however, the only report of icebergs sighted in this part of the outward composite route which would have been avoided if this suggested modification had been adopted, was in May, 1855, latitude 49° S., longitude between 6° E. and 12° E., and also in March, 1856, in latitude $46^{\circ} 50'$ S. and longitude $3^{\circ} 11'$ E. We therefore do not, at present, feel ourselves called on to press this alteration.*

As far however as the homeward passage is affected by the consideration

* See also in remarks on Catalogue and Chart.

of this locality, it tends only to confirm our previous convictions, and we have more abundant reasons than ever to impress on the mariner the propriety of sighting the Horn and the Falkland Islands on his homeward passage. He has every inducement to follow this track. It is favorable for making a short passage, and it will keep the ship clear from the only locality, adjacent either to the passage out or home, in which real danger exists on account of the ice. I think great sacrifices should be made to follow this part of the route home rigidly, for I have not met with any very extraordinary voyage home made by a ship that has given to the Horn or the Falkland Islands a wide berth. In all cases in which no danger has been experienced from ice, delays have been occasioned and the passage has been spoiled, nor have I a case on record in which any mariner, following this advice, has met with ice after arriving east of the meridian of 75° W.

And lastly. In all ships adopting the composite route to or from Australia, a good look out should be kept, and the changes of the thermometer should be carefully observed. Captain M'Donald of the "James Baines" met with a considerable number of icebergs in his late extraordinary passages, but he observes that these stray icebergs do not considerably increase the risk with a prudent and careful captain. He has only to notice his thermometer to be forewarned of the approaching danger. In one case he found that the thermometer fell 4° as he approached the ice, and 2° more as he got to leeward of the berg. Captain Newland, in the log of the "Champion of the Seas," proves also that the thermometer not only indicates the approach towards ice, but also the amount of ice we may expect to meet with. In latitude $58^{\circ} 30'$ S. he passed two icebergs, the temperature of the water being 44° and that of the air 42° . Between 50° S. and 47° S. he passed thirty-nine icebergs, the thermometer then fell to 35° in water and 36° in air. In this instance the temperature was 8° or 9° lower, although the ship had sailed about 10° nearer to the equator, at which point the mean temperature is 10° higher. In one case however, it is reported that the temperature of neither the air nor water was sensibly affected when an iceberg was approached. It is probable that in this instance some meteorological change might have counter-balanced the effect of the proximity of ice. But, if otherwise, this single exception cannot prove that the thermometer may be neglected, but rather enforces the necessity of keeping a most careful look out at all times.

REMARKS ON THE CATALOGUE AND CHART.

In the following catalogue the ice is arranged according to the month in which it was observed, so as to show at a glance, when examining the chart, the comparative amount in any month. That which has been met with in the region we have designated as "dangerous from ice" in the chart, is indicated in the catalogue by an asterisk.(*). In both the catalogue and the chart we can readily distinguish the ice impediments which were encountered during the extraordinary six months in the years 1854-1855 by their indices being numbers and all other indices being letters. The capital letters represent the situation of ice seen at other seasons in passing to and from Australia, and the small letters ice sighted on voyages to other places.*

In obtaining the data of which the catalogue is a record, I have examined about two hundred and fifty† logs of Australian ships. Of these one hundred and four contain reports of ice. Besides which I have received forty-one separate records of ice observed in the Austral seas derived from other sources. In very many cases the same ice has been reported as seen from several ships, and as having been met with during the same month. In such cases only one entry is made and the latitude and longitude given is the mean of those given in the several reports. But if seen in more than one month from different ships, one report for each month is given although there exists no doubt of its being the same ice. The reports of "the connected icebergs" form the most remarkable example of this. They are twenty-one in number, extending through five consecutive months commencing with December, 1854. Its position for the mean of each month is given in the catalogue and its position is indicated on the chart between the indices eight and nine. It will be observed that in the immediate vicinity of the Composite route to Australia, as laid down on the chart, between the meridians of 20 W. and 46 E., numerous reports of

* The numerous icebergs extending from 62 S. and 80 W. to 53 S. and 82° W. were met with by ships going to the west coast of America, but having been observed during the month of December, 1854, we have marked them with the index 3, the same as that which represents ice seen on passages to and from Australia during the same month.

† I had commenced the practice of examining ships' logs for ice a considerable time before it had occurred to me that it was desirable to note cases in which the voyage had been made to and from Australia without meeting with ice. But since December, 1856, I have recorded one hundred and eighteen such cases.

ice are recorded. The comparison of this region with other parts of the area designated as "dangerous from ice" might lead to a wrong conclusion, unless we take into consideration the fact that nearly two hundred of the ships before referred to have passed within a hundred miles of this route, and that more than three-fourths of these met with no ice there, whereas on the homeward voyage only eleven ships from which I have received reports had entered this region, and each of these had encountered ice.

It is a very remarkable fact that amongst the numerous reports I have received from Australia going ships, not one was within the region in which ice is met with during the month of October, 1854. This is much to be regretted, since this was the month that preceded the extraordinary season of 1854-1855, and in the previous month numerous icebergs were met with. I should be particularly obliged to any captain who was navigating these seas in October, 1854, if he would communicate to me whether he met with any ice, or otherwise.

INDEX TO CHART.	DATE.	LATITUDE.	LONGITUDE.	DESCRIPTION.
<i>a</i>	August, 1840.	38 30 S.	1 0 E.	Four icebergs.
<i>a</i>		36 10 S.	13 40 E.	Two icebergs.
<i>a</i>		37 30 S.	14 40 E.	An iceberg reported 1000 ft.
<i>A</i>	August, 1854.	*50 0 S.	41 0 W.	Several icebergs. [high.
<i>A</i>		*53 0 S.	47 0 W.	Icebergs.
<i>A</i>		*55 0 S.	51 0 W.	Pack ice.
<i>A</i>		*56 30 S.	60 0 W.	Pack ice.
<i>b</i>	September, 1840.	37 30 S.	10 0 E.	An iceberg.
<i>b</i>		37 0 S.	13 0 E.	An iceberg.
<i>b</i>		37 0 S.	15 0 E.	An iceberg.
<i>b</i>		37 0 S.	15 0 E.	An iceberg 1000 feet long and 400 feet high, pro- bably the same as the last named, observed from a different point.
<i>b</i>		41 30 S.	14 10 E.	An iceberg one mile in cir- cumference.
<i>b</i>		37 45 S.	14 50 E.	An iceberg.
<i>b</i>		40 30 S.	19 0 E.	Two icebergs.
<i>b</i>		40 20 S.	26 0 E.	An iceberg.
<i>b</i>		37 30 S.	36 19 E.	Icebergs.
		to 38 47 S.		
<i>B</i>	September, 1844.	38 0 S.	24 0 E.	Numerous icebergs.
		to 39 15 S.	to 27 0 E.	

INDEX TO CHART.	DATE.	LATITUDE.	LONGITUDE.	DESCRIPTION.
<i>B</i>	September, 1844.	59 0 S.	140 0 W.	Numerous icebergs.
			to 150 0 W.	
<i>C</i>	September, 1854.	63 0 S.	69 0 W.	Pack ice.
		to *58 0 S.	to 72 0 W.	
<i>C</i>		*58 0 S.	56 0 W.	An ice field.
<i>C</i>		*44 40 S.	15 20 W.	Icebergs.
<i>C</i>		*47 30 S.	10 40 W.	Icebergs.
<i>C</i>		*49 40 S.	1 40 W.	Numerous icebergs.
			to 0 20 E.	
<i>c</i>		48 0 S.	45 0 E.	An iceberg.
<i>D</i>	September, 1856.	55 33 S.	140 0 W.	An iceberg 420 feet high.
<i>e</i>	September, 1857.	*59 0 S.	61 20 W.	Pack ice.
<i>f</i>	October, 1840.	38 0 S.	12 0 E.	Five icebergs.
		to 37 0 S.	to 14 0 E.	
<i>g</i>	October, 1853.	53 0 S.	19 0 E.	An iceberg.
<i>g</i>		55 20 S.	23 10 E.	An iceberg.
<i>h</i>	October, 1855.	*48 0 S.	21 0 W.	A very large iceberg.
<i>E</i>	November, 1839.	44 0 S.	87 30 E.	Numerous icebergs 400 feet high.
		to 45 0 S.	to 100 0 E.	
<i>i</i>	November, 1840.	39 50 S.	33 40 E.	An iceberg.
<i>F</i>	November, 1853.	*47 40 S.	10 0 W.	An iceberg.
<i>F</i>		*40 45 S.	4 0 W.	An iceberg.
<i>F</i>		52 26 S.	19 42 E.	An iceberg 1500 feet long.
<i>F</i>		52 20 S.	27 47 E.	Three icebergs.
<i>F</i>		51 3 S.	32 21 E.	Numerous icebergs.
		to 51 20 S.	to 37 6 E.	
<i>F</i>		53 51 S.	86 40 E.	An iceberg.
<i>2</i>	November, 1854.	56 0 S.	112 0 W.	Two hundred and eighty icebergs.
			to 92 0 W.	
<i>2</i>		*61 0 S.	65 0 W.	Numerous icebergs.
		to *58 0 S.	to 61 0 W.	
<i>2</i>		*58 0 S.	59 0 W.	Icebergs.
<i>2</i>		*56 30 S.	56 0 W.	Icebergs.
<i>2</i>		*44 20 S.	22 0 W.	Icebergs.
<i>2</i>		50 0 S.	30 0 E.	An iceberg.
<i>2</i>		52 0 S.	25 0 E.	Thirty-three icebergs.
		to 53 0 S.	to 45 0 E.	

INDEX TO CHART.	DATE.	LATITUDE.	LONGITUDE.	DESCRIPTION.
2	November, 1854.	51 0 S.	41 0 E.	Numerous icebergs.
		to	to	
		52 0 S.	45 0 E.	
2		53 0 S.	88 0 E.	Fifty-seven icebergs.
			to	
			102 0 E.	
<i>G</i>	November, 1855.	*48 0 S.	18 0 W.	A very large iceberg.
<i>j</i>	December, 1772.	49 46 S.	19 58 E.	Numerous icebergs.
		to	to	
		54 55 S.	21 44 E.	
<i>k</i>	December, 1789.	44 30 S.	44 30 E.	An iceberg.
<i>l</i>	December, 1830.	*57 0 S.	23 0 W.	Icebergs.
<i>l</i>		*56 30 S.	13 0 W.	Icebergs.
<i>l</i>		55 30 S.	13 0 W.	Icebergs.
<i>l</i>		*58 0 S.	9 0 W.	Numerous icebergs.
		to	to	
		*57 0 S.	10 0 W.	
<i>m</i>	December, 1840.	39 24 S.	39 0 E.	An iceberg.
<i>H</i>	December, 1853.	48 30 S.	35 20 E.	An iceberg.
<i>H</i>		53 0 S.	95 20 E.	An iceberg.
3	December, 1854.	*62 0 S.	80 0 W.	Numerous icebergs.
		to	to	
		53 0 S.	82 0 W.	
3		*55 0 S.	49 0 W.	Numerous icebergs.
		to	to	
		*56 0 S.	47 0 W.	
3		*50 0 S.	30 0 W.	Numerous icebergs.
		to	to	
		*47 0 S.	47 0 W.	
8		*44 0 S.	28 0 W.	An immense connected mass of icebergs, greatest dimen- sions 60 miles, see page 242.
		to		
		*43 0 S.		
3		*50 0 S.	3 0 E.	Numerous icebergs.
		to	to	
		*53 0 S.	22 0 E.	
3		*52 12 S.	15 24 E.	Eight icebergs.
3		*50 30 S.	19 30 E.	Icebergs.
3		*53 0 S.	23 0 E.	Forty icebergs.
		to	to	
		*54 0 S.	25 0 E.	
3		49 0 S.	22 24 E.	An iceberg.
3		47 30 S.	23 30 E.	Icebergs.
3		49 40 S.	34 30 E.	Icebergs.
3		49 0 S.	36 0 E.	Icebergs.
3		48 0 S.	41 0 E.	Two icebergs.
3		44 0 S.	46 0 E.	Numerous icebergs.
		to	to	
		45 0 S.	51 0 E.	

INDEX TO CHART.	DATE.	LATITUDE.	LONGITUDE.	DESCRIPTION.
3	December, 1854.	53 0 S.	85 0 E. to 99 0 E.	Numerous icebergs.
3		52 30 S.	84 0 E. to 102 0 E.	Numerous icebergs.
n	January, 1773.	51 0 S.	59 0 E.	Icebergs.
c	January, 1850.	34 0 S.	20 20 E.	An iceberg seen from the Cape.
	January, 1855.	*42 0 S.	22 0 W.	Connected icebergs same as 8 and 9.
4		*41 0 S.	17 0 W.	An iceberg.
4		*42 0 S.	16 0 W.	An iceberg.
4		*42 0 S.	14 0 W.	Icebergs.
4		*45 45 S.	21 0 E.	Icebergs.
4		47 0 S.	37 46 E.	Icebergs.
4		50 0 S.	41 0 E.	Icebergs.
4		47 20 S.	41 10 E.	Numerous icebergs.
I	January, 1856.	*49 10 S.	14 0 E.	Icebergs.
I		45 30 S.	45 30 E.	Numerous icebergs.
I		50 20 S.	113 0 E.	Fifty-five icebergs.
J	January, 1858.	*53 30 S.	51 0 W.	Numerous icebergs, one three miles long.
J		*51 30 S.	47 49 W.	Numerous icebergs.
J		*53 0 S.	48 0 W.	Numerous icebergs.
J		*51 24 S.	44 53 W.	Icebergs.
p	February, 1774.	*54 0 S.	21 0 W.	Several icebergs.
p		*54 20 S.	15 30 W.	Three icebergs.
p		*53 30 S.	8 0 W.	Two icebergs.
p		*52 30 S.	4 0 W.	Three icebergs.
p		*53 54 S.	0 30 W.	Three icebergs.
p		*53 30 S.	6 35 E.	Three icebergs.
q	February, 1755.	*58 0 S.	6 3 W.	Three icebergs.
q		*57 20 S.	4 0 E.	An iceberg.
q		*54 26 S.	24 21 E.	Numerous icebergs.
q		52 50 S.	26 30 E.	Two icebergs.
5	February, 1855.	*51 0 S.	47 0 W.	Numerous icebergs.
		*41 30 S.	21 40 W.	Connected icebergs same as 8 and 9.
5		*41 30 S.	18 30 W.	Icebergs.
5		50 0 S.	107 0 E.	An iceberg.
5		46 0 S.	134 0 E.	Icebergs.
K	February, 1858.	*51 0 S.	47 0 W.	Numerous icebergs.
r	March, 1774.	*53 17 S.	11 50 E.	Icebergs.

INDEX TO CHART.	DATE.	LATITUDE.	LONGITUDE.	DESCRIPTION.
<i>r</i>	March, 1774.	*48 30 S.	14 30 E.	Two icebergs.
	March, 1839.	66 0 S.	98 0 E.	
		to	to	Numerous icebergs south of the limits of the chart.
6	March, 1855.	67 0 S.	102 0 E.	
		59 0 S.	132 0 W.	
		to	to	Numerous icebergs.
		58 0 S.	128 0 W.	
6		58 0 S.	118 0 W.	
			to	Numerous icebergs.
			136 0 W.	
6		*62 0 S.	60 0 W.	
		to	to	Numerous icebergs.
		*58 0 S.	67 50 W.	
6		*58 30 S.	63 10 W.	
			to	Numerous icebergs.
			65 0 W.	
6		*52 30 S.	40 30 W.	Numerous icebergs.
6		*52 0 S.	39 0 W.	
		to	to	Thirty-nine icebergs.
		*44 0 S.	32 0 W.	
6		*40 0 S.	21 30 W.	
		to	to	Connected icebergs same as 8 and 9
		*41 0 S.	23 30 W.	
6		*42 20 S.	14 40 W.	Icebergs.
6		*50 0 S.	7 0 W.	
		to	to	Numerous icebergs.
		*52 0 S.	0 0	
6		*53 14 S.	14 41 E.	An iceberg 960 feet high.
6		*52 0 S.	0 0	
		to	to	Numerous icebergs.
		*53 20 S.	23 0 E.	
<i>L</i>	March, 1856.	*46 50 S.	3 11 E.	Icebergs.
<i>L</i>		46 0 S.	37 30 E.	Icebergs.
<i>M</i>	March, 1858.	*51 0 S.	50 0 W.	Icebergs.
<i>M</i>		*50 10 S.	47 21 W.	Seventeen large icebergs.
<i>s</i>	April, 1828.	35 50 S.	18 5 E.	An iceberg.
<i>s</i>		37 31 S.	18 17 E.	A very large iceberg.
<i>N</i>	April, 1853.	51 0 S.	131 0 W.	A large iceberg.
<i>N</i>		53 0 S.	120 0 W.	Six icebergs.
<i>N</i>		36 0 S.	20 0 E.	Numerous icebergs.
<i>P</i>	April, 1854.	53 0 S.	80 0 E.	Two icebergs.
7	April, 1855.	57 0 S.	101 0 W.	Numerous icebergs.
7		58 0 S.	88 0 W.	Numerous icebergs.
7		57 0 S.	88 0 W.	
			to	Numerous icebergs.
			79 0 W.	
7		*48 20 S.	48 40 W.	Several icebergs.

INDEX TO CHART.	DATE.	LATITUDE.	LONGITUDE.	DESCRIPTION.
7	April, 1855.	*51 0 S.	44 0 W.	Drift ice, probably the debris of icebergs.
		to	to	
		*55 0 S.	40 0 W.	
7		*53 0 S.	41 0 W.	Numerous icebergs.
7		*52 0 S.	41 0 W.	Icebergs.
7		*51 0 S.	40 0 W.	Numerous icebergs.
			to	
			39 0 W.	
9		*40 0 S.	20 0 W.	Connected icebergs, greatest length 60 miles, the same as 8.
		to	to	
		*41 0 S.	22 0 W.	
7		*47 46 S.	7 47 W.	Three great icebergs.
7		*43 0 S.	5 0 W.	Numerous icebergs.
7		*48 30 S.	6 0 E.	Numerous icebergs.
		to	to	
		*49 0 S.	12 0 E.	
7		43 30 S.	13 0 E.	Numerous icebergs.
7		46 0 S.	27 0 E.	Numerous icebergs.
<i>R</i>	April, 1856.	46 0 S.	39 30 E.	An iceberg.
<i>R</i>		47 0 S.	53 0 E.	Several icebergs.
<i>R</i>		47 20 S.	58 0 E.	An iceberg.
<i>t</i>	May, 1839.	39 30 S.	16 41 E.	An iceberg.
<i>S</i>	May, 1855.	49 0 S.	11 0 E.	Very numerous icebergs.
			to	
			31 0 E.	
<i>S</i>		45 0 S.	37 40 E.	A very large iceberg.
<i>S</i>		48 0 S.	38 0 E.	An iceberg.
<i>T</i>	June, 1853.	60 0 S.	141 0 W.	Pack ice.
		to		
		57 0		
<i>V</i>	June, 1857.	61 41 S.	47 49 W.	Pack ice.
			to	
			44 0 W.	

ON THE MICROSCOPE AS APPLIED TO NATURAL HISTORY.

By Thomas Sansom, A.L.S., F.B.S.E.

(READ 18TH FEBRUARY, 1858.)

In bringing this subject before the Historic Society, I do not propose to entertain the members with details of discoveries of my own, but rather to point out some of the more important applications of the Microscope to the investigation of minute structures in the animal and vegetable kingdoms. The microscope has now become to the naturalist a necessary instrument. To the amateur it will ever be a favourite recreation, and no school should be without one. A few hours' demonstration of subjects under the microscope will generally convey more information to a student in natural history than can be gained by weeks of reading. Many of the members present are no doubt aware that the compound microscope, as at present used, is a comparatively modern instrument, and it is impossible to tell to what extent researches into the higher branches of natural history would have been carried by Leeuwenhoek, Harvey and others, had they possessed such instruments as those now manufactured. It is not, however, the possession of a fine instrument that will make a naturalist; but when a perfect instrument is placed in the hands of a man possessed of good observing faculties we may hope for great results. Practical naturalists have frequently had to overcome difficulties which to an ordinary observer would have been insurmountable. Such was the case with Leeuwenhoek; he not only manufactured the microscopes he used, but cast and ground his lenses. Our distinguished countryman, the late George Newport, I am informed, made all his early investigations into the anatomy of insects with the eye-piece of a telescope, which he bought at Chertsey for half-a-crown. In the present day naturalists have very few difficulties to contend with, for a better instrument may now be purchased for from three to five guineas than could be procured for thirty pounds twenty years ago; and I think it may safely be affirmed that no optical instruments are more perfect than our best modern microscopes. The degree of perfection which has been attained during the past quarter of a century

by our London opticians, is marvellous. And to the communication of the discoveries of Mr. Joseph Jackson Lister, in 1829, we are mainly indebted for these advances.

Towards the latter end of the seventeenth century, the microscope, although very rude in form, excited intense curiosity amongst scientific men. Several books were published detailing the results of their investigations. The *Micrographia* of Robert Hooke, published in 1667, was in its day a wonderful production. The early volumes of the Philosophical Transactions of the Royal Society abound with papers on microscopical subjects, chiefly contributed by Grew, Malpighi and Leeuwenhoek.

In 1703 the *Hydra* was first discovered by Leeuwenhoek, and in 1741 M. Trembley of Geneva, in a paper published by the Royal Society, described the peculiarities of this remarkable animal. Some of the experiments detailed in this communication are so graphically recorded, and have been subsequently so well and so repeatedly verified, that I cannot refrain from quoting them as given by Baker.* M. Trembley, after explaining the drawing of a *Hydra* with eleven horns or arms, states, “ the horns serve for legs and arms, and at the end whence they come out, is a mouth or passage into the stomach, which, extending the whole length, forms a body like a pipe or gut, open at both ends. There are two species. Some stretch their bodies to an inch and a half in length, but that is rare ; few even of the larger kind being above nine or ten lines long ; and such can contract themselves to not above a single line, stopping if they please at any degree between the utmost contraction and the utmost extension. Their horns differ in length according to the species ; one sort can extend them seven inches. Their number of horns is also different, but a full-grown *Hydra* has seldom less than six. Their common posture is to fasten their tails to something, and then extend the body and arms into the water ; and they make use of their progressive motion to place themselves conveniently for this purpose. Their arms are so many snares stretched out to catch small creatures in the water ; and when any insect happens to touch an arm, it is caught and conveyed to the mouth by the contracting of the arm, or if the creature struggles the other arms assist. They are voracious animals. A *Hydra* can swallow a worm whole twice or thrice its own length. If the worm comes endways it is swallowed in that manner, otherwise it goes down double, and makes several foldings in the stomach, which distends wonderfully for its reception. The worm soon dies there, and after it has been squeezed or sucked is voided by the mouth. The *Hydra* brings forth its young from the exterior parts of the body, and

* The Microscope made easy, &c., page 98. By Henry Baker, F.R.S. 3rd Edition. London, 1744.

“that not always a single one at once; it is common to see five or six, nay, sometimes nine or ten at the same time; and when one drops off another comes in its place.”

The most singular part of M. Trembley's account is what he states concerning his operations on these creatures. “If one of them be cut in two, transversely, the forepart which contains the head, mouth and arms, lengthens itself, creeps and eats on the same day. The tail part forms a head and mouth at the wounded end, and shoots forth arms, more or less speedily as the heat is favorable. In summer they will be shot out in twenty-four hours, and the new head is perfected in a few days.”

Cut a *Hydra* where, or into what parts you please, transversely, each part becomes a complete *Hydra*. But being too small an animal to admit of being divided into many parts at once, M. Trembley first cut one into four quarters, and let them grow; then divided each quarter, and proceeded subdividing till he obtained fifty-one out of one. He tried numerous experiments of this sort, but the most extraordinary was the following. Cutting a *Hydra* through the head and body, but not quite through the tail, in a short time there were two perfect heads and bodies with but one tail; these were in like manner divided, until a *Hydra* with seven heads and bodies conjoined to one tail was produced. These seven heads were cut off at once; seven others grew in their stead, and each of the seven heads so cut off, putting forth a new body, became a perfect *Hydra*. It was stated that the body of the *Hydra* is a sort of a hollow gut or tube; this may be turned inside out as you would turn a stocking, notwithstanding which the animal eats grows, and multiplies, as if nothing had been done to it.

From the middle of the last century down to within about thirty years ago, very little had been done towards improving the microscope, and little use appears to have been made of the instrument, especially in this country. You are all no doubt aware that the study of natural history was confined almost exclusively to the medical profession and professional naturalists; our books were all written in Latin, and consequently were sealed books to the majority of the population; but with the present century a new era dawned, and many valuable works have been written in our own language: accordingly, natural history in its several branches has gradually progressed, until it has become a favorite study, and forms one of the branches of liberal education. To this increased interest in natural history may be traced the improvements in the

microscope, for as science advanced, and structural differences became more important in affording distinctive characters, the want of good instruments became more apparent. The foreign opticians were the first to endeavour to meet this demand, and to this fact, no doubt, is to be attributed the notion that the foreign microscopical glasses are superior to the English. To say so at the present day may be called a vulgar error, for no one having the slightest knowledge of the subject will admit that such is the case. The best foreign object glasses of the present time are scarcely equal to second-rate glasses of British manufacture.

In proof of this I may state, that shortly before the opening of the Great Exhibition in 1851, M. Nobert, of Griefwald, in Prussia, manufactured certain test objects for microscopic glasses, which as specimens of delicate manipulation are surprising productions. These tests consist of small plates of glass, ruled with parallel lines in bands of different distances, each band consisting of a series of from about a dozen to thirty lines.

The specimen which I exhibit this evening is the first that was sent to this country by M. Nobert. He sent it as a challenge, stating that none of the German microscopists could count the finest lines, and he, like most of his countrymen, thought he was safe in defying the English microscopists. This slide was sent to Mr., now Dr., Bowerbank, of Highbury, who not only counted the lines in each series, but also measured their distances apart. The finest lines in the slide he found were 46,000 to an inch. M. Nobert was now put on his mettle, and he ruled a still finer slide, taking care to compute the distance apart of each series of lines. In the second slide, the finest lines were 62,000 to the inch. Since that time many much finer slides have been ruled, and in every instance they have been read and measured with London glasses. On one slide, in the possession of Mr. Warren De La Rue, there are 322 lines arranged in thirteen bands, each band being composed of a series of from seventeen to thirty-nine lines, and the distances apart of each series of lines varies from $\frac{1}{45045}$ to $\frac{1}{112612}$ of an inch.*

Perhaps the most important discoveries lately made in natural history are those of Suminski, with regard to the fecundation of ferns, and

* John Quekett. A Practical Treatise on the Microscope. Second Ed., p. 476.

of Thuret and Decaisne of the fructification of the algæ. These discoveries have been further carried out by Hofmeister and others.*

Until the publication of Suminski's observations, the Cryptogamia were considered unisexual, but I think there can now be no doubt that they have both male and female organs, though of a different character to those of the flowering plants. "The reproduction of ferns by their spores" (says Professor Henfrey) "exhibits some very remarkable phenomena. When the spores are sown, they germinate after a time by a protrusion of the inner coat of a delicate membranous pouch, which elongates and becomes divided by septa into an articulated cellular filament; some of the cells emit slender tubular filaments (which are not cut off by septa), apparently radical hairs, and while these remain uncoloured, the larger cells from which they arise acquire chlorophyll-granules. The young *prothallium*, as it is called, increases in size by cell division, and at length acquires a somewhat heart-shaped form, and soon some of the cells produce, upon the inner surface, the structures called *antheridia*, which consist of stalked cellular bodies, of simple but peculiar structure, in the interior of which are developed minute cellules containing ciliated spiral filaments (spermatozoids), which, on the bursting of the antheridial sac, escape not only from this, but from their own parent cells, and swim about actively in the water by the aid of their vibratile cilia.

"These antherids are often formed in large numbers, and the prothallium goes on producing them as long as it exists; but at a period somewhat later than the earlier antherids, there appear near the middle, at the front of the under surface of the prothallium, other cellular bodies of more complex structure, which are the *archegonia* or ovule-like bodies. The archegone consists of a cellular papilla composed of a few colourless cells, with a canal running down its centre (an intercellular passage) leading to a cell (*embryo cell*) at the bottom, contained in a cavity (*embryo sac*) in the substance of the prothallium. It is supposed that the ciliated spiral filaments make their way down this canal, like the pollen tubes through the micropyles of Phanerogamous ovules (Hofmeister states that he has actually seen this), and then the embryo-cell becomes developed into an embryo, which soon exhibits rudimentary leaves and rootlets, bursts out from the cavity of the prothallium (which decays away) and grows up into the ordinary leaf-bearing stem of the Ferns. The prothallia bear a variable number of archegones, but not nearly so many as of antherids, and they exhibit, in most fully developed specimens, a number of effete organs of both kinds, which are readily distinguished by the deep brown color assumed by the membranes lining their cavities."†

Much light has within the last few years been thrown upon the structure of plants by Schleiden, Mohl, Henfrey and others. To Mohl we are greatly

* Vide "Carpenter on the Microscope," pp. 367 and 401, for further information on this subject.

† Professor Henfrey in *Micrographic Dictionary*, page 261. Lond. 1856.

indebted for his valuable treatise on the anatomy and physiology of the vegetable cell.* His definition of the elementary organs of a plant is as follows:—"The primary form of the elementary organ of plants is that of a completely closed, globular, or elongated vesicle, composed of a solid membrane, and contains a fluid (*utricle*). If this remains still closed after its development is completed, it is called a *cell*, but if a row of utricles arranged in a line become combined, during the course of their development, into a tube with an uninterrupted cavity, through the absorption of their cross walls, a compound elementary organ is produced—the vessel."

Although Mohl reduces the structure of all plants to cells and vessels, it must not be supposed that these cells and vessels are alike; such is not the case, the forms and varieties of cells being innumerable. An extraordinary property possessed by some plants (perhaps by all) is the power of circulation or rotation of the protoplasm in the cells. The *Vallisneria spiralis*, *Tradescantia virginica*, *Anacharis alsinastrium*, *Characeæ*, &c., afford striking examples of this property, and will amply repay the labor of investigation. This subject has been largely discussed in the late volumes of the Microscopical Journal, but still the subject is by no means exhausted. An interesting discovery was lately made by the Hon. and Rev. Sidney Godolphin Osborne in examining the *Closterium lunula*, one of the Desmidiæ. At the end of each frond he observed a peculiar whirling or boiling motion, which upon closer examination is found to extend all round the edge of the frond. Mr. Osborne's papers appeared in volumes ii. and iii. of the Quarterly Journal of Microscopical Science, and will amply repay perusal.

In examining into the structure and growth of the vegetable cell many of the fresh-water algæ, from their great transparency and mode of growth, are peculiarly well adapted to show the various transformations. It is only by watching the same plant for days that any facts can be arrived at; but it should always be borne in mind that any one fact added to our stock of knowledge is so much gained to science; and it is from the record of simple observations (though trifling in themselves) that our great naturalists have been able to found their splendid theories and systems.

Another fruitful source of enquiry has lately been discovered. I allude to the Diatomaceæ. Very few of this tribe of plants were known a few years ago, but now we have many hundreds of named and well-established species.

* Principles of the Anatomy and Physiology of the Vegetable Cell, by Hugo Von Mohl. Translated by Arthur Henfrey, F.R.S., &c. London, 1852.

They are found in great abundance in every part of the kingdom. The Diatomaceæ are distinguished from their near allies, the Desmideæ, and other uncellular algæ, by having an epidermal covering of silex or flint. This renders their forms indestructible by the ordinary agents of decomposition. They are all microscopic, and form the most beautiful and delicate objects known. Some species inhabit the sea and some are found in fresh water, while others prefer a mixture of both. They are frequently found in a fossil state in all parts of the world, and near Leghorn there is a layer of fossil Diatomaceæ of considerable thickness, and extending over a space of many square miles. If this deposit is examined it will be found to consist of pure Diatomaceæ.*

Great difference of opinion prevailed about the nature of these organisms, Ehrenberg contending they were animal, while others considered them vegetable. This difference of opinion is not to be wondered at, for some of the species have a motion peculiarly their own. Many move about the field of the microscope with great facility. But the motion in *Bacillaria paradoxa* is so extraordinary, that I cannot refrain from calling your special attention to it, and in doing so quote the words of Mr. Thwaites.†

“When the filaments have been detached from the plants to which they adhere, a remarkable motion is seen to commence in them. The first indication of this consists in a slight movement of a terminal frustule, which begins to slide lengthwise over its contiguous frustule; the second acts simultaneously in a similar manner with regard to the third, and so on throughout the whole filament, the same action having been going on at the same time at both ends of the filament, but in opposite directions. The central frustule thus appears to remain stationary, or nearly so; while each of the others has removed with a rapidity increasing with its distance from the centre, its own rate of movement having been increased by the addition of that of the independent movement of each frustule between it and the central one. This lateral elongation of the filament continues until the point of contact between the contiguous frustules is reduced to a very small portion of their length, when the filament is again contracted by the frustules sliding back again as it were over each other; and this changed direction of movement proceeding, the filament is again drawn out until the frustules are again only slightly in contact. The direction of the movement is then again reversed, and continues to alternate in opposite directions, the time occupied in passing from the elongation in one direction to the opposite being generally about forty-five

* The author of this paper will be happy to forward to any member of the Society interested in microscopical subjects, specimens of this deposit, in its natural state.

† Proceedings of Linnæan Society, vol. 1, p. 311.

“seconds. If a filament while in motion be forcibly divided, the uninjured frustules of each portion continue to move as before, proving that the filament is a compound structure, notwithstanding that its frustules move in unison. When the filament is elongated to its utmost extent, it is extremely rigid, and requires some comparatively considerable force to bend it, the whole filament moving out of the way of any obstacle rather than bending or separating at the joints. A higher temperature increases the rapidity of the movement.”

As the Diatomaceæ became better known, disputes arose amongst the naturalists as to the nature of the markings on their silicious shields. So late as 1841 the existence of transverse striæ on the shells of *Pleurosigma Hippocampus* was denied, and it was many months before the question was satisfactorily settled. As this tribe of plants became better known, it was found that the markings on the shells of the various species served as excellent tests for trying the resolving qualities of our object glasses. But it was also discovered that in distinguishing these markings much depended upon the angular aperture of the object glass, and I think to this single fact we are indebted in a great measure for the improvements made in objectives by our London opticians within the last ten years.

In order to elucidate the nature of the markings on these shells, great ingenuity has been shown in the construction of achromatic condensers. Many of the contrivances are most elaborate and very costly, but I think they may be dispensed with by any one who will take some little trouble to study the application of oblique light. If a shell of *Pleurosigma angulatum* be examined under a quarter inch object glass with direct light, no markings except the median line and nodule will be seen; if the same shell be examined with oblique light, it will be observed that the whole surface appears covered with fine lines; but if the illumination be applied on the opposite side of the microscope, the lines will appear to take an opposite direction, clearly indicating the existence of what appear to be two sets of lines. This is easily explained by a careful manipulation of the light, when the two sets of lines are resolved at the same time, and the shell appears chequered. If these apparent lines be carefully measured, they will average 52,000 to the inch.

There were great doubts as to the nature of these markings: it had been stated by Mr. Wenham that they were dots, and he even went so far as to affirm that in form they were hexagonal. But as it required very delicate manipulation and very fine glasses to prove this statement, it was received

with misgivings. However, Mr. Wenham set that question at rest by obtaining a photograph of the actual object, magnified with a power of about 1200 diameters; this he again enlarged to about 16,000 diameters, so that we now see each dot about one tenth of an inch in diameter; and I think that henceforth there can be no doubt as to the nature of these markings. One of these photographs, presented to me by Mr. Wenham, shows the hexagonal form distinctly. So great is the magnifying power, that only one third of the shell appears in the field of view: the entire shell, natural size, is under the hundredth of an inch in length; and if it had been possible to magnify the whole shell at one time, the photograph would have exceeded twenty-seven inches in length.*

In examining these very delicate objects it is sometimes necessary, and always desirable, to measure their size in order to arrive at correct estimates of the more nearly allied species. This is now done with comparatively little difficulty by means of Jackson's eye-piece micrometer. Having first ascertained the exact value of each line of the Micrometer with reference to the object glass in use, the process becomes very simple; and with that instrument an object can be measured, when a high power is used, to within the forty thousandth part of an inch; with Ramsden's cobweb micrometer the measurement may be estimated even nearer. The old microscopists were sorely troubled in their measurements by having to compare grains of sand, spores of *Lycoperdon*, small pieces of silver wire and various other substances, whose dimensions they had previously estimated, with the object under consideration, in order to arrive at an approximate measurement, which, as may be supposed, was often far from correct.

I have before stated, that in reviewing the *Diatomaceæ*, oblique light is required to bring out these peculiar markings; this is easily obtained by the aid of the bull's eye. If the microscope is placed at an angle of about 45° , more or less, according to the angular aperture of the object glass, and the lamp on a level with the under part of the stage, the light may be condensed by the aid of the bull's eye to any degree; or almost the same purpose is answered by placing the mirror on one side. When a very strong light is required an object glass makes an excellent achromatic condenser.

* For a systematic arrangement of these organisms—*vide* "Synopsis of the British *Diatomaceæ*," by the Rev. William Smith, with Plates by Tuffin West, 2 vols., 1853 and 1856.

Polarized light will be found a valuable auxiliary in the examination of many objects, and its use should never be neglected. Under ordinary light many of the harder tissues of plants, as for instance the vegetable ivory, nut-shells and others too numerous to mention, present a confused appearance, but immediately the polariscope is applied, the walls of the cells or other peculiar structures become visible and most distinct. I would, therefore, strongly recommend the use of polarised light in all cases of difficult definition, in order to see if any decomposition of the light takes place. To the crystallographer it is invaluable. Many crystals, quite indefinable when viewed with ordinary light, are intensely beautiful under the polariscope.

To the scientific naturalist the camera lucida will be found most useful. By this instrument we are enabled to obtain accurate delineations of the most difficult forms. To its use may be traced the great superiority of the drawings published in the present day over those of the last century, or even later. This apparent improvement is manifest not only in the execution of the plates, but in what is more important, namely : the correct proportion that one part of the structure bears to another.



Photographed by H. J. Cauty.

Macdure, Macdonald & Macgregor lith Liverpool.

HUMAN SKULL FROM WALLASEY POOL.

NOTICE OF MAMMALIAN REMAINS DISCOVERED IN THE
EXCAVATIONS AT WALLASEY FOR THE BIRKENHEAD
NEW DOCKS.

By Mr. Thomas J. Moore, Keeper of the Derby Museum, Liverpool.

(READ FEBRUARY 18TH, 1858.)

In the course of the excavations now in progress at Wallasey Pool, for the Birkenhead New Docks, several Horns, Skulls, and Bones have from time to time been found imbedded at a considerable depth below the late bed of the Pool. The greater portion of these have been handed over by Messrs. Thompson, the contractors, to the Birkenhead Dock Committee for presentation to the Free Public Museum; and by the kind permission of the Library and Museum Committee I am enabled to exhibit them before the Society this evening. The specimens consist of the following—

A Human Skull and Thigh Bone.

Several Horns and portions of Skulls, (in one instance nearly perfect,) of the Great Fossil Ox, *Bos primigenius*.

A Skull of the Small Fossil Ox, *Bos longifrons*, in a nearly perfect condition.

Four imperfect Horns of the Fossil Stag, supposed to be identical with the Red Deer, *Cervus elaphus*.

The Rib of a large Cetacean.

Some pelvic bones, two vertebræ, and a few bones of the extremities, of the Genera *Bos* and *Cervus*.

The Human Skull and a tibia or leg bone (probably of a Red Deer,) found therewith, were discovered opposite the Copper Works about five feet below the level of the Old Dock Sill, or about ten feet below the original bed of the Pool, embedded in sandy gravel. This would give a depth of about thirty-two feet below the top line of the river wall of the Docks.

The exact depth at which the other specimens were obtained was not so accurately noted at the time of discovery, but as nearly as I can ascertain the Horns of the Deer and Cattle were found in the upper part of the Pool at a depth of about twenty-five feet below the level of the surface of the surrounding land, embedded in clay.

During the excavations roots and stumps of large trees in natural positions have also been found at slightly varying levels. One of these, an oak, I measured, and found the girth to be seven feet four inches, though much of the wood had been torn away. It was situated a little to the west of the great tank at the lowest level to which the excavations proceed, namely thirty-four feet below the top line of the Dock wall; further up the Pool the roots occur at a level of a foot or two higher. The clay beneath them is a boulder clay, and very much more tenacious than that above. At the foot of one of the trees at the higher end of the Pool were discovered two at least of the Horns of the large Ox.

It would appear to be highly probable from the presence and position of these roots and stumps, that the site of the late Pool had formerly been dry land, upon which lived and died the animals whose remains are now met with.

The Human Skull, though fully adult, is of small dimensions, particularly in the region of the forehead. It is about to be submitted to the critical examination of Messrs. Thurnam and Davies, who are engaged in the publication of an extremely valuable work on the skulls of the aboriginal and early inhabitants of Britain, entitled "*Crania Britannica*." This and some of the other bones bear traces of the polypidoms of marine Zoophytes and shells of Barnacles (*Balani*.)

Of the three species of Quadrupeds whose Horns are exhibited, two, the *Bos primigenius* and the *Bos longifrons*, are now utterly extinct. This does not necessarily imply any very high antiquity for the period at which the site of the Pool was occupied by dry land, for Professor Owen considers the *Bos primigenius* as in all probability identical with a race spoken of by Cæsar as not being much inferior to the elephant in size, and differing from all the domestic cattle by the great strength and expansion of its horns.

The Stag Horns however agree so well in character and form with those of the Red Deer of Modern Europe, that Professor Owen regards the



Photographed by H. G. Sauty.

Maclure Macdonald & Macgregor lith. Liverpool.

BOS LONGIFRONS FROM WALLASEY FORD.

two animals as one and the same: the differences to be observed not warranting specific distinction. Full details of all three species will be found in the Professor's work on the "British Fossil Mammals and Birds," with notices of the various places in which their remains have been found.

Horns and Skulls more or less perfect are occasionally found at Leasowe imbedded in the peat and clay. Very fine antlers of the Stag, and an unbroken skull of the *Bos primigenius*, thence obtained, are in the possession of the Hon. Sir Edward Cust, the Society's President. The skull of the *Bos longifrons* now exhibited is more perfect than any I have yet seen. Small as the horns are they are probably those of a bull: they exceed in size many that have been discovered, some of which in the possession of Mr. H. Ecroyd Smith, and collected by him at Leasowe and Hoylake, he has obligingly allowed me to exhibit. I am also indebted to Mr. Morton for the horn of a female or young individual of the *Bos primigenius* found at Bootle which he has kindly lent me for the same purpose.

I subjoin dimensions of the skull of *Bos longifrons* and of the largest specimen of *Bos primigenius*. For the purpose of comparison I have added the measurement of other specimens quoted by Professor Owen.

THE GREAT FOSSIL OX, *Bos primigenius* of Bojanus.

	Skull from Wallasey, in the Liverpool Free Public Museum.		Skull from Atholl, in British Museum.*	
	Feet.	Inches.	Feet.	Inches.
Length of skull.....	2	4	3	0
Span between tips of horn cores	2	5	3	6
Curve of horn, outside.....	2	4		
„ „ inside	1	10		
Girth of base of horn cores	1	3		
Breadth of forehead between the horns {Greatest	12		0	10½
Least	7			
Length of series of upper molar teeth ...	0	7	0	6½
Width between the orbits.....	0	11½		

It will thus be seen that large as is the specimen exhibited, it is inferior in size to that in the British Museum, which is itself exceeded by one described by Mr. H. Woods as discovered in the bed of the Avon in 1838, the horns of which between the tips measure four feet within half-an-inch.

* From Owen's British Fossil Mammals and Birds, pp. 501-2.

LONG FRONTED OR SMALL FOSSIL OX, *Bos longifrons*. Owen.

	Skull from Wallasey, in Liverpool Free Public Museum.		Skull in Hunterian Museum, London, from Irish Bog.*	
	Inches.	Lines.	Inches.	Lines.
Length of skull	20	0		
„ from supra-occipital ridge to nasal bones	9	6	8	0
Breadth of skull between roots of horns ...	5	6	5	0
„ between middle of orbits	7	0	6	9
Circumference of base of horn core.....	5	4	4	0
Length of horn core following outward curvature.....	7	10	4	0
Span of horn cores from tip to tip	9	5	12	0
„ at widest expansion.....	12	0		
Length of series of upper molars	5	5		

* From Owen's British Fossil Mammals and Birds, p. 512, probably that of a female.

ON THE MANCHESTER ART-TREASURES EXHIBITION, 1857.

By George Scharf, Jun., F.S.A., &c.

(READ 15TH APRIL, 1858.)*

When the Members of the Historic Society of Lancashire and Cheshire visited the Manchester Exhibition† in the summer of 1857, (June 26th,) I very much regretted that circumstances prevented me from offering on the spot any detailed account of the various treasures of art which they proposed to examine; but I had already received strict injunctions from the Executive Committee not to attempt any explanation to the visitors in the galleries of the Exhibition. In consequence of this preclusion, I have availed myself of an invitation from the Society, and drawn up a slight general account of the development and various contents of the Exhibition, now no longer, alas! as a guide, but capable only of serving as a reminder to those who were fortunate enough to see and enjoy its chief glories, and to afford also some general record of the principal attractions which assembled so large a concourse of visitors from every quarter.

The local and historic associations connected with the Manchester Exhibition might naturally claim a special record for it in the pages of the Transactions of the Historic Society of Lancashire and Cheshire, and I feel myself especially honoured in finding myself entrusted with the task. As the wholesome fruit of peace, the *prototype* of Exhibitions, that of Hyde Park in 1851, claims a first and grateful recognition. It was the happy thought of the Prince Consort, and served to display in the most triumphant manner the relation of Great Britain with the rest of the world. Whilst, on this occasion, England found an opportunity of measuring her own industrial produce with that of all other nations, she strengthened also the means of improving and extending her resources.

* This meeting was held in the Theatre of the Royal Institution, where Mr. Scharf had the advantage of pointing to several of the most important pictures which had been contributed by the Institution to the Art-Treasures Exhibition, and which for this occasion, had been removed from the public gallery by permission of the President and Council.

† The term, "Art-Treasures' Exhibition," a modification of "Exhibition of Treasures of Art," first appeared in the *Illustrated London News*, and seems derived from the title of Dr. Waagen's volumes, published in 1854.

In 1851, home manufactures and inventions of all kinds were prominent, and the abundance of Foreign produce made England appear as the great mart of the world. But native fine arts held a comparatively subordinate position. Sculpture, however, from all nations was extensively introduced in every part of the building, not only for its own sake but as a means of ornamentation. It became in fact one of the most important sources of attraction and admiration. At Manchester, sculpture was less satisfactorily provided for, and that mainly on account of peculiar restrictions hereafter to be mentioned, whilst painting, which has so eminently distinguished the Art Treasures' Exhibition, was only regarded incidentally at Hyde Park in 1851. It may be well on this occasion to glance at the various gatherings of art and industry which have been held previously to the one which we have so recently enjoyed.

Periodical Industrial Exhibitions have long been known in France, and I remember visiting a magnificent gallery erected for that purpose in the Champs Elysées, at Paris, during the Autumn of 1839, when manufactures of every kind were displayed with surpassing taste.

At London, in the year 1849, an excellent exhibition, although of a very limited character,—being confined to works of art, curiosities, and objects of vertu—was held under the name of the Mediæval Exhibition, in the Rooms of the Society of Arts in the Adelphi. The chief promoters of this were Mr. A. Franks, now of the British Museum, Mr. Albert Way, Mr. Hailstone, and Mr. Nisbett.

The Society of Arts thus had the credit of being the first to shew the advantage of forming a temporary museum in London, although the system had long been adopted on a limited scale by Mr. Way and Mr. Tucker, at the annual meetings of the Archæological Societies when visiting the principal Cathedral cities of this country. The Archæological Institute had therefore some claim upon the notice of the Manchester authorities at the time of their visit to that City during the Chester congress in 1857.

So obviously beneficial did the scheme of the Hyde Park Exhibition seem to all classes, that great and universal efforts were made to ensure its permanence; this however the very nature of the preparatory engagements precluded; but a similar building on a more extended scale was determined on by private enterprise, to which the public might enjoy permanent access.

In this scheme, which resulted in the Sydenham Crystal Palace, *education* and illustrations of art were to be the principal features.

During the organization and progress of this earnest testimony to the appreciation of the ever to be remembered *great* exhibition of 1851, a temporary fabric was erected in Dublin, and the Exhibition held in that city became the principal art feature of 1853. In many respects it resembled the parent collection in the display of both industrial and foreign art; but it comprehended less of foreign productions, and the building was on a comparatively small scale.

At Dublin the novel feature was the prominence given to paintings of all nations, both ancient and modern.

To promote this many very distinguished owners sent liberal contributions, and with this Exhibition the names of Mr. Dargan and Mr. J. C. Deane have been most honourably connected.

In 1854 the Crystal Palace was opened at Sydenham, under the especial patronage of Her Majesty and the Prince Consort, who, both during the course of construction and ever since, have manifested the deepest interest in its progress.

In America also, the principle was recognised by the opening of an Exhibition at New York, which the promoters of the '51 Exhibition were invited to attend.

At Paris, in 1855, a great triumph was achieved. There in the "Exposition Universelle" the products of all nations were fully recognised, and France herself had reason indeed to be proud of the artistic strength which she thus had the power of displaying.

Painting, there, was formed into a special and distinct department, although, with very small exception, it consisted entirely of modern pictures, both native and foreign. In water colour painting the English nation took a high stand.

The spirit for Exhibitions still being strong, our northern manufacturers after having displayed, in the Exhibitions of London, Dublin and Paris, their power and taste,—not only as creators, but dispensors of an unparalleled amount of industrial art,—might naturally desire to make both their means and refinements yet further manifest by inviting the world to meet at a centre, *from* which hitherto products only had radiated. Man-

chester was naturally regarded as that industrial point: a fact indeed made evident by the extraordinary confluence of the railroads, and by its exact geographical position between London and Edinburgh. There seems to have existed for some time in that district a strong predisposition in favour of such an undertaking, so that the bold thought and practical readiness of two or three gentlemen, when once announced, took immediate form and promptly received the countenance and support of those best able to carry out the scheme.

The distinctive features of the enterprise were immediately determined on, and it is remarkable that from first to last these were never lost sight of or even in any degree modified. The organisers best knew the amount of time which business people could devote to preparation and expectation; but, judging now from the results, there can be little doubt that the value of the display was much impaired by want of sufficient time between the appointment of officers and the opening of the Exhibition.

The first thought of the Manchester Exhibition was started by Messrs. J. C. Deane, P. Cunningham, T. Fairbairn and Ashton, in the spring of 1856. In May of the following year it was to be completed. When we remember the extent of the Exhibition and its numerous branches of art, and consider the amount of work to be achieved within a single year; namely, contributions to be applied for, works of art to be selected and negotiated about, in all quarters of the United Kingdom; a building to be constructed expressly to receive them, and then, as soon as housed, how everything was to be described, catalogued, and arranged ready for public view, it appears almost impossible. The work however could only be effected by division of labour and the employment of many hands, and for this purpose Directors of the several departments were appointed; these gentlemen exercised an absolute control under the authority of the Executive Committee.

On the 26th of March, a meeting was held at the Town Hall, Manchester, and a guarantee fund was opened, to which in the course of a few days thirty-two gentlemen gave their signatures for £1000 each, and sixty for £500 each. Before the end of June, the guarantee fund amounted to £70,000.* The subscribers were then constituted into a general council,

* In the first circular issued by the Committee, the names of subscribers to the guarantee fund numbered upwards of one hundred, and among them 36 noblemen and gentlemen subscribed for £1000 each. The total amount of the fund at that time was £72,500.

with the late Earl of Ellesmere as the President, and from these again the following seven gentlemen were selected to form the Executive Committee.

Thomas Fairbairn, Esq., Chairman,
 James Watt, Esq., (Mayor,)
 Thomas Ashton, Esq.,
 William Entwisle, Esq.,
 Sigismund Stern, Esq.,
 Edmund Potter, Esq.,
 Joseph Heron, Esq., (Town Clerk.)

On the 13th of August, the architectural design of Mr. Salomons having been approved, the foundation for the Exhibition building was laid. Messrs. Young and Co. were the contractors, and Mr. W. Dredge became the acting engineer.

Mr. J. C. Deane took office as the General Commissioner, and Mr. Peter Cunningham assumed the control of the Portrait Gallery, whilst to myself in September were entrusted the duties of Art Secretary to the Committee and Director of the Gallery of Ancient Masters and Classic Antiquities. I declined from the first to have anything to do with modern paintings or to take any part whatever in the removal of works of art after the closing the Exhibition. The necessity of forming a collection of objects of general art and curiosities* soon became apparent, and Mr. J. B. Waring was appointed at the head of that department, whilst Mr. William Smith, Mr. Dominic Colnaghi, and Mr. E. Holmes, whose untimely death was deeply to be regretted, undertook the collection and arrangement of the prints and original drawings.

The main dimensions of the building were as follow—Extreme length 704 feet by 200 feet in width; the great hall internally measured 632 feet in length; the nave was 104 feet wide, the side halls 48 feet wide and 432 feet in length, their height in centre 50 feet 6 inches; the height of the nave in centre 56 feet 6 inches; entire length of transept 200 feet, width 104 feet; the oriental court 72 feet by 48; the principal water-colour gallery 200 feet long by 24 feet; smaller galleries 52 feet by 24 each.

* The success of an Exhibition of Ancient Furniture, &c., held at Gore House, Kensington, in 1853, had sufficed to shew the effect and importance of such an assemblage.

Early in July, 1856, the Royal sanction and patronage were received, and the Prince Consort evinced a deep interest in the schemes and report of progress when submitted to His Royal Highness by a deputation from the Committee.

With reference to future prospects and the measures to be adopted, the Prince was pleased to address a letter to the President of the Council of the Exhibition. The main questions were so definitely set forth and the whole subject was viewed in so just and clear a light that I feel it will be gratifying my hearers if I quote a few passages from this valuable document.

“How to succeed in collecting such treasures, fondly cherished as they are by their owners, who are justly jealous of their safety, is the problem to be solved.

“In my opinion the solution will be found in the satisfactory proof of the usefulness of the undertaking. The mere gratification of public curiosity, and the giving an intellectual entertainment to the dense population of a particular locality, would be praiseworthy in itself, but hardly sufficient to convince the owners of works of Art that it is their duty, at a certain risk and inconvenience, to send their choicest treasures to Manchester for exhibition.

“That national usefulness might, however, be found in the educational direction which may be given to the whole scheme. No country invests a larger amount of capital in works of Art of all kinds than England; and in none, almost, is so little done for Art-education! If the collection you propose to form were made to illustrate the history of Art in a chronological and systematic arrangement, it would speak powerfully to the public mind, and enable, in a practical way, the most uneducated eye to gather the lessons which ages of thought and scientific research have attempted to abstract; and would present to the world, for the first time, a gallery such as no other country could produce, but for which, I feel convinced, the materials exist abundantly in private hands among us. * *

“A person who would not otherwise be inclined to part with a picture would probably shrink from refusing it, if he knew that his doing so tended to mar the realization of a great National object.”

I had already formed an *ideal* gallery on paper, taking the choicest specimens of every master in the history of art, as far as I remembered their existence in this country. This plan, I found, corresponded very satisfactorily with the scheme recommended by His Royal Highness, who, in pursuance of his promise to Lord Ellesmere, forwarded a methodized catalogue of the painters of all schools for their special service.

The Prince Consort permitted a large selection to be made from his unrivalled collection of paintings by the early German masters at Kensing-

ton Palace, and Her Majesty promptly granted leave to the Committee to select paintings from the Royal Galleries at Windsor, Hampton Court, and Buckingham Palace. This gracious condescension had the immediate effect of giving impulse to others, and, in addition to the public announcement of these facts, copies were largely circulated among picture owners, of the Prince Consort's letter to Lord Ellesmere. Lord Ellesmere himself at once volunteered to contribute the following pictures—

- 1.—The Circumcision, by Mazzolino di Ferrara.
- 2.—A large Triptych of Saints, by Andrea da Salerno.
- 3.—The Entombment, by Ludovico Caracci.
- 4.—Assemblage of Saints, by Guercino.
- 5.—A Portrait, (No. 670) by Van Dyck.
- 6.—Landscape, by Jacob Ruysdael.
- 7.—The Immaculate Conception, by Guido Reni.
- 8.—A Village School, by Jan Steen.
- 9.—A Charge of Cavalry, by Wouvermans.
- 10.—The Satin Gown, by Terburg.
- 11.—A Girl Sewing, by N. Maes.

This list does not include any of the pictures which belong to the celebrated Bridgewater Gallery. These had all been acquired by the Earl himself; but there is little doubt that had his Lordship's life been spared, some, at least of the world-renowned chefs d'oeuvre of Raphael, Poussin, and Titian would have ennobled the collection at Old Trafford.

Among the foremost supporters and promoters of this great undertaking, were the Duke of Manchester, the Duke of Newcastle, and the Earl of Derby. The last nobleman had bought largely at Strawberry Hill, the first possessed an extensive collection of family pictures, hitherto but little known. Lord Overstone, who became, on the decease of Lord Ellesmere, President of the Council of the Exhibition, also contributed a large quota of his first-rate pictures. But on the extensive list of Noble followers of the Royal examples, the names of the Earl of Darnley, the Earl of Yarborough, and Lord Ward claim a foremost place; since, not only should the genuine excellence of their property be considered, but it should be borne in mind that they intimated a willingness to allow selections to be made from their galleries to an almost unlimited extent. By this good fortune many pictures from the Orleans gallery, which had

been for so many years withdrawn from public observation, were at once secured. Pictures also which had, at a still earlier period, belonged to Lord Arundel, and many that had till recently graced the leading collections of Italy, ensured a certain *tone* to the Exhibition. Notwithstanding the prompt response which proceeded from so many important quarters, it is not to be concealed that the conductors of the preparations felt serious difficulty in the total refusal of assistance from several of the most widely celebrated collections of art. The committee learnt at a comparatively early period that nothing was to be expected from Blenheim, Hamilton Palace, the Bridgewater Gallery, Stafford House, Burleigh, Hatfield House, Longford Castle, Belvoir Castle, Orwell Park, Lord Dover or Lord Ashburnham. Insurmountable obstacles also prevented any selections being made from Dulwich, Sir John Soane's, the Fitzwilliam Museum at Cambridge, or the National Galleries of London.

These incidental disappointments however were in some degree compensated by the munificent contribution of some of the choicest pictures belonging to the Marquess of Hertford,* forty-four pictures in all; and these having a peculiar celebrity, and being invariably inaccessible were looked for with the more eager curiosity. The Royal Institution of Liverpool, which may be regarded as the earliest formed gallery of Italian pictures from the 13th to the 16th centuries, in England, most liberally placed the whole series at the service of the Committee. This collection had, in fact, been founded by the illustrious Roscoe, aided by his distinguished friend Mr. W. Y. Otley.

The Museum of Ornamental Art was now, by the varied and attractive

* 1. Murillo—Adoration of the Shepherds. 2. Ditto—St. Thomas of Villanueva. 3. Ditto—Joseph and his Brethren. 4. Ditto—The Annunciation. 5. Ditto—A Holy Family. 6. Van Dyck—Philip de Roy. 7. Ditto—His Lady. 8. Ditto—Female Portrait. 9. Ditto—Male Portrait. 10. Velasquez—Don Balthazar. 11. Ditto—Ditto. 12. Ditto—Lady with a Fan. 13. Ditto—Don Balthazar. 14. Rembrandt—The Unmerciful Servant. 15. Ditto—Jan Pelicorne. 16. Ditto—His Lady. 17. Ditto—Jan Pelicorne. 18. Reynolds—Strawberry Girl. 19. Ditto—Nelly O'Brien. 20. Ditto—Miss Bowles. 21. Rubens—The Rainbow Landscape. 22. Ditto—Holy Family. 23. Hobbema—Landscape. 24. Ditto—Ditto. 25. Salvator Rosa—Landscape. 26. Andrea del Sarto—Holy Family, 27. Watteau—Fête Champetre. 28. Lancret—Ditto. 29. Pater—Ditto. 30. Van de Velde—Large Sea Piece. 31. Adrian Van de Velde—Migration of Jacob. 32. Greuze—An Offering. 33. Ditto—A Girl with a Dove. 34. Weenix—Dead Game. 35. N. Poussin—The Seasons. 36. G. Poussin—Tivoli. 37. Champagne—The Nativity. 38. Sassoferrato—The Marriage of St. Catherine. 39. Hilton—Nymphs Bathing. 40. De la Roche—A Mother and Child. 41. Ruysdael—A Waterfall. 42. Gainsborough—Portrait of a Lady holding a Miniature. 43. Descamps—An Oriental Scene. 44. Horace Vernet—Algerine subject.

nature of its contributions, growing rapidly into favour and importance. Mr. Waring, the director, found himself admirably supported by the co-operation of Messrs. Redford and Dudley, and Mr. Chaffers, a professed dealer in objects of art and virtù, rendered especial service by the experienced manner in which he made arrangements for the transmission of the various contributions he was empowered to collect. Meanwhile Mr. Holmes had quietly pursued his vocation by visiting the most celebrated possessors of the rarest engravings, and he was afterwards induced by the Committee to undertake the collecting and arranging the water-colour drawings for which his knowledge and taste peculiarly qualified him, whilst the universal trust and influence reposed in Mr. Dominic Colnaghi, the eminent printseller, rendered him the most fitting manager both of the transport and arrangement of the engravings. The photographs, reduced in extent from what had originally been intended, were placed under the care of Mr. P. Delamotte, whilst to Dr. Royle alone was assigned the great responsibility of collecting and arranging the beautiful contents of the Indian court.

Modern art, especially the works of living artists, was justly held from the first to be one of the principal attractions. It was perhaps, at the same time, one of the most arduous departments to be carried into effect, inasmuch as artists, when the holders of their own works, are generally difficult to correspond with, and where called upon to decide upon their own merits would become still more so. The committee however devised an admirable plan. Every artist of eminence received a letter requesting him to specify a certain number of what he considered to be his best works, and to name their present possessors. From this list again the committee selected the pictures most desirable and accessible to them. Letters were immediately dispatched to the respective possessors, and by this means an excellent and impartial collection was formed. Independently of painting and of industrial art, another and a very profitable source of attraction was devised for visitors to the exhibition, in the establishment of a first-rate orchestra, placed under the management of Mr. Charles Hallé. On this subject we cannot expatiate; but in considering the popularity which the Art Treasures ultimately attained, it would be unfair to leave this point of attraction altogether unnoticed. The relief also afforded by the gratification of another sense, after so long straining the eye and memory in the

various galleries should be gratefully remembered, whilst at the same time it may be admitted that the visitor's devotion to *fine art* remained unbroken.

Having now glanced at the various stages by which the exhibition attained completion: having named the principal contributors of the best materials, and those who were employed to set them in order, it may be acceptable to enumerate the main points of rarity and attraction in each department, and finally to consider what have been the immediate results upon the visitors and those who took an interest in the undertaking, and still further to endeavour, as far may be, to calculate the effect which is likely, in future times, to accrue from it.

Among objects of ancient art placed chiefly in the southern transept and in the south aisle of the nave towards the wall of saloon A, were many small objects of considerable importance. Two large glass cases contained some very fine specimens of painted Greek vases of the best period. These were contributed by Mr. Mayer, of Liverpool, and Mr. Addington, of London. Most of them had been published whilst formerly in the possession of Dr. Emil Braun, Campanari and Mr. Rogers. Another case contained an extensive series of small bronze figures, pateræ and various ornaments contributed also by Mr. Mayer, Mr. Pulszky, and Mr. Norton. Many Egyptian antiquities were placed in some of the lower compartments of the cases, and among them the signet of Pharaoh was especially admired. A fine large Grecian painted vase of an early period, representing women at the fountain Enneacrunos, which formerly belonged to Rogers the poet, now Mr. Addington's, and a vase representing the death of Hector, belonging to Mr. Mayer, deserve special mention. Among the bronzes, a beautiful statue of Venus, found in Caria, once the property of Mr. Hertz; an ancient Etruscan mirror published by Micali and Gerhard, and a curious little bronze male statue, with silver letters inserted in the thigh, should not be forgotten. A Roman sword of parade, attributable to Tiberius, and found at Mayence, was also displayed by Mr. Farrer. A very rare Roman painting, on glass, contributed by Mr. W. Dilke, and numerous consular ivories of great value in the history of art, belonging to Mr. Mayer,* and for-

* See the wood-cut illustration to this essay of the Diptych of the Roman Consul Clementinus which formed a portion of this series. The Historic Society is indebted to Mr. Murray of Albemarle street, Messrs. Day of Gate street, and Messrs. Bosworth and Harrison of Regent street, for the advantage of permission to use numerous wood engravings selected from many of the well-known works which they have published.



IVORY CARVINGS, FORMING A DIPTYCH OF THE ROMAN CONSUL CLEMENTINUS, A.D. 513.

From the Fejérváry Collection. Contributed to the Manchester Exhibition
by Mr. Joseph Mayer, F.S.A.

merly in the Fejévary collection, have always been regarded as especial celebrities. Of antique sculpture in marble, there was a very limited display, and that obviously on account of the difficulty of moving fragile objects when ponderous and massive.

The Pembroke marbles at Wilton and Ince Blundell, and the Worsley marbles formerly at Appuldurcombe, (all celebrated and published collections,) were mainly detained for these reasons. The late Mr. Smith Barry, notwithstanding, sent a very liberal contribution of statuary from Marbury Hall, and his great sculptured vase, (originally the stonework to the mouth of a well, but adapted in modern times to its present elegant shape), formed one of the noblest features in the exhibition, and afforded a magnificent centre to saloon B, containing the works principally of Titian, Paul Veronese and Rubens. It was much to be regretted that many large sculptures from Nineveh and Persepolis, placed at the disposal of the committee and actually forwarded by Lady Charlotte Schreiber, Mr. Layard, Sir Henry Rawlinson, Sir William Ouseley, The Lord Mayor, and Mr. Stirling, were not ultimately exhibited.

Although the ownership was not during the period of the exhibition satisfactorily ascertained, two other specimens of antique statuary merited particular admiration; the one was the portion of a very beautiful female face, and the other the fragment of a young man's head with Alexandrian features and what seemed to be a portion of a lion's skin covering the temple.

We now enter upon the Pictorial features of the southern gallery (saloons A, B and C) of the ancient masters.

It will be borne in mind that I adopted one leading principle in the arrangement of the pictures entrusted to my care. I desired not only to arrange them in chronological order, but to mark as far as possible the contemporaneous existence of opposite schools.

The long southern wall as far as the middle of saloon C where the termination of the series was noted both in the catalogue and on the wall,* was therefore devoted *exclusively* to Italian art; and on the opposite wall were ranged the paintings of the *foreign* nations to correspond as nearly as possible, in

* This termination of the Italian line was in a measure necessitated by the great number of large pictures of the Spanish and Flemish Schools, and also by the desirability of placing the magnificent Charles I, by Van Dyck, as a termination to the vista along the Southern galleries.

point of time, with the dates of the Italian ones facing them. Thus the German, Flemish and French schools held their due succession; but owing to the vast crowd of pictures, and from the previous uncertainty of their size, although many precautions had been taken, it was very difficult to carry the arrangement strictly into effect. From paucity of materials to illustrate the works of the predecessors of Rubens, and from the abundant pressure of the works of his followers, it became imperative to arrange the works of this great Flemish colourist directly opposite to those of Titian, whereas, in reality, Rubens came into the world a year after Titian died. The most ancient painting which the galleries contained was a fragment of a fresco* from one of the ancient Roman tombs described in Middleton's works, and once at Strawberry Hill. It is now the property of Mr. Wentworth Dilke. The traditions of painting from the Byzantine period, and some of the modern Russian school, were also seen in various contributions from the Prince Consort, Christ-Church, Oxford, and the Museum of Norwich.

One of the most interesting pictures of the early period in the history of British art was the small picture, in two compartments,† representing Richard II. with his patron saints, in presence of the Virgin and Child surrounded by angels. This valuable painting was contributed from Wilton House, by the Right Hon. Sydney Herbert, and deserved comparison with another contemporary portrait of the unfortunate monarch, belonging to the Jerusalem Chamber, Westminster, which was hung at the commencement of the British Portrait Gallery.‡ Whilst yet dwelling upon the infancy of art, we should remember Lord Ward's contribution of Fra Angelico's Last Judgment,§ which although feebly designed was crowded with figures, finished like a miniature, and bathed in colours of the purest and most undying hue. Near it was hung a curious fragment, on a large scale, belonging to Mr. Layard,|| painted in fresco, and forming almost the only portion rescued from destruction of Signorelli's great composition at Arezzo, representing the fall of the angels. It is especially described by Vasari, and forms one of the landmarks in the history of art. A genuine and rare early Sienese work, of a most unusual subject, by Simone Memmi, "The return of our Saviour to His parents after having disputed with the

* No. 1 of the official catalogue of the Manchester Exhibition, May 20th, 1857.

† No. 42. ‡ P.G. No. 15. § No. 58. || No. 39. See the accompanying woodcut, drawn by G. Scharf, Jun., and liberally lent for the present volume by Mr. Murray, of Albemarle Street.

FROM KUGLER'S HANDBOOK OF PAINTING.



COMPOSITION OF THE FALL OF THE REBELLIOUS ANGELS.

By Spinello Aretino, about 1410, to illustrate the fragment of fresco contributed by Mr. A. H. Layard to the Manchester Exhibition. No. 39 of the Catalogue.



CHRIST RETURNING TO HIS PARENTS.

Painted by Simone Memmi in 1342. Contributed by the President and Council of the Liverpool Royal Institution to the Manchester Exhibition, No. 37 of the Catalogue

FROM KUGLER'S HANDBOOK OF PAINTING.



THE TRIUMPH OF SCIPIO.

By Andrea Mantegna. Contributed by G. Vivian, Esq., to the Manchester Exhibition.
No. 103 of the Catalogue.

“Doctors in the Temple,”* was contributed by the Liverpool Royal Institution. A primitive attempt of one of the Venetian painters who rose to such glory in the days of Titian deserves remembrance. It was a large square altar-piece, by Carlo Crivelli,† crowded with figures, having the Virgin and Child enthroned in the centre with St. Peter as Pope, on his knees receiving the keys from them.

Bellini, also of the Venetian school, was well represented; but Andrea Mantegna, his contemporary, who wrought principally at Padua and Mantua, here deserves especial notice. He painted the celebrated Triumphs of Julius Cæsar for the Duke of Mantua, which are now at Hampton Court, and the long, dingy but less mutilated picture, of the Triumph of Scipio, seen at Manchester,‡ and the property of Mr. Vivian, which afforded altogether the most perfect epitome of the merits and peculiarities of the painter.

Perugino, the master of Raphael, was to be seen in a large and characteristic picture,§ contributed by Lord Northwick from Thirlestane House; but much more favourably in four exquisite little pictures (from the predella or step of some large altar-piece), belonging to Mr. Alexander Barker. They represent the Nativity, the Baptism, Christ and the Samaritan woman, and “Noli me tangere.” Of all the ancient pictures in the Exhibition, the Holy Family (unfinished), attended by four angels, attributed to Michael Angelo,|| excited most interest among connoisseurs. It was sold as the work of Ghirlandajo (the master of Michael Angelo) to the Rt. Hon. H^r Labouchere; but the well-known critic Von Rumohr had already pronounced it to be an emanation of the far greater pupil, an opinion which has since been promulgated by Dr. Waagen, and in consequence of his high authority, the name of Michael Angelo seems now to have been very generally adopted.

Of works by that most eminent of all painters, Raphael Sanzio d’Urbino, the Manchester Exhibition contained a few genuine examples; but none, in fact, sufficient to afford a fair evidence of his transcendant power either in largeness of style, expression, drawing or richness of composition. The Crucifixion, from the gallery of Cardinal Fesch,¶ belonging to Lord Ward, and the Agony in the Garden, from the Gabrielli palace at Rome, and now the property of Mr. Fuller Maitland,*² served to show Raphael when under

* No. 37. See the accompanying wood-cut drawn by G. Scharf, Jun., and contributed by Mr. Murray.

† No. 80. ‡ No. 102. See the illustration drawn by G. Scharf, Jun., and contributed by Mr. Murray. § No. 117. || No. 107. ¶ No. 123. *² No. 134.

the influence of his master Perugino. The pictures of the Three Graces* from Lord Ward and the two Madonnas† from Earl Cowper indicated his first efforts towards a freer style : this emancipation was shown in the glass-obsured Madonna and Child contributed by Mr. R. J. Mackintosh,‡ who had purchased it from the collections of Henry Hope and Rogers the poet. Two fine examples of Raphael's more developed period were afforded by the Earl of Warwick—one on a large scale, the Assumption of the Virgin,§ when he was studying with, and no doubt aided by, his friend Fra Bartolommeo—and, the other, a striking portrait, in peculiar costume, of the beautiful Joanna of Arragon.|| This is a well-known and often-referred to duplicate of the picture in the gallery of the Louvre. Fra Bartolommeo's own work, evincing an astonishing power of colour, might be seen in a Riposo¶ contributed by Earl Cowper from Panshanger. A picture also of the Saviour bearing his Cross*² hanging near it, and attributed by Mr. Brett, the owner, to Raphael, left too deep an impression on the minds of spectators to be omitted from this list. The remaining pictures which had Raphael's name were either of a minor class or fabrications and old school copies. A portrait of Copernicus,†² by a contemporary of Raphael, was naturally regarded with much interest ; but a truly fine work of art, a Holy Family, by Sebastiano del Piombo,‡² was for the most part passed over on account of the dullness of surface and want of attractive colours. One Francia alone held a high place : it represented the Baptism of our Saviour,§² and was contributed by Her Majesty from Hampton Court Palace. From the same source also proceeded a large picture powerfully illustrative of the Michael Angelo school—Venus and Cupid coloured by Pontormo upon the outlines prepared by Buonarroti. Michael Angelo, as is well known, frequently bestowed this help upon his favourite scholars ; and the great picture of the Raising of Lazarus, now in the National Gallery of London, is a remarkable instance, since in that picture the figure of Lazarus appears to be almost entirely his work.

The early Milanese school was marked by a valuable picture, by Ambrogio Borgognone,||² belonging to the Prince Consort. It is clear and brilliant in colour, and represents the Virgin and Child upon an elevated rocky throne : the Baptist stands on one side and St. Ambrose protects a kneeling donor on the other. It is signed with the artist's name, and dated 1510.

* No. 139. + Nos. 136 and 141. † No. 133. § No. 147. || No. 158. ¶ No. 118.
 *² No. 121. †² No. 160. ‡² No. 161. §² No. 132. ||² No. 122.

A curious specimen of early Ferrarese Art, by Mazzolino di Ferrara, "the Egyptians drowned in the Red Sea,"* shews the slow progress with which the later refinements penetrated some minds, if not into particular geographical districts. This Chinese-looking picture bears the date of 1521, one year after Raphael had ceased to exist.†

That the school of Milan attained peculiar eminence is seen in the fine picture by Gaudenzio Ferrari,‡ who studied under Raphael, the property of Mr. Holford. A grand picture marking another epoch of art was the allegorical portrait of Charles V, painted by Parmigianino in 1530. As a work especially mentioned by Vasari, it merits particular attention.§ It is now the property of Mr. Angerstein. Titian, the greatest of Venetian colourists, was nobly represented. Among the vast number it will suffice to particularize Lord Darnley's Europa,|| and the portrait of Ariosto ;¶ a portrait called Alessandro de' Medici,*² from Hampton Court, and a comparatively small picture of a Riposo, with back ground of rich trees, and a glowing sunlight penetrating them.†² This, the property of Mr. Holford, and a composition frequently repeated, is a veritable chef d'œuvre. Tintoretto was seen to the fullest advantage, with all his excellence and peculiarities, in the two large pictures from Hampton Court, the Esther, Ahasuerus and the nine Muses,‡² and the large Leda,§² formerly in the Orleans collection. Paul Veronese, however, was not seen at Manchester to equal advantage. The grand ceiling pictures which Lord Darnley acquired from the Orleans gallery||² were not adequate to the display of all his powers, nor did the sketch¶² from Miss Burdett Coutts, and once belonging to Mr. Rogers, suffice even to afford a type. Annibal Caracci was seen in great force. The fine Lucca picture*³ contributed by Speaker Denison, and the great St. Roch,†³ formerly an Orleans picture, and now Mr. Wadmore's, fully sufficed to manifest his power. A work of the same artist, from Castle Howard, on a smaller scale, and by no means, equally ex-

* No. 178. † It was not by oversight or accident, as surmised by the writer of the article in the *National Review*, page 203, that this picture came jarringly upon the spectator, after he had been enjoying the power and delicacy of Raphael and Correggio. I desired especially to shew the slowness of some masters in adopting a larger and freer style, and with the same object also I introduced the little Greek picture of St. George, No. 189 on the east wall of saloon C. See note on page 25 of the Exhibition Catalogue.—G. S.

‡ No. 235. § No. 210. || No. 259. ¶ No. 257. *² No. 256. +² No. 301.

†² Nos. 314 and 274. §² No. 302. ||² Nos. 285-288. ¶² 306.

*³ No. 329. +³ No. 327.

pressive of the painter's remarkable peculiarities and excellencies, was the so-called "Three Maries."* This picture obtained from the first a most remarkable amount of popularity with the visitors to the exhibition, although I am afraid it is but a proof of the gregariousness of large assemblies and the readiness with which the general mass of people follow that which a few bold mouths praise. Had they been previously acquainted with the admirable engraving which Sharpe executed from it, and which really *is* a first-rate work of art, their eagerness to see the original might have been understood. The picture, although heavily painted, is powerfully dramatic.

The inspired features of the upturned countenance of St. John,† also from Castle Howard, and the figure of St. Agnes with folded hands,‡ from Windsor Castle, were fine examples of Domenichino the pupil of Annibal Caracci. When once seen, they excited universal interest; but they are not like the little picture I have previously offered remarks upon.

The number of pictures of excellent quality belonging to the Spanish school, especially by Murillo, was a remarkable feature of the Manchester Exhibition. The vestibule between saloons B and C was almost entirely filled with the works of Murillo alone. In this recess the two pictures belonging to Sir Culling Eardley,§ and the Madonna and Child,|| which Lord Overstone acquired from the Santiago and Berwick collections, shone brilliantly; nor can we forget the Good Shepherd,¶ contributed by Baron Rothschild, and originally the *pendant* to the lovely St. John and the Lamb, now in the London National Gallery. Velasquez also was seen to great advantage, even in close proximity to Van Dyck, at the extreme end of the gallery, and the combination was in many respects a happy one, since it afforded a rare opportunity for an immediate comparison of the style, subject, and treatment adopted by each great master. The Olivarez,*² and Philip IV and his Queen†² were superlatively fine examples of portraiture.

The contributions of Colonel Hugh Baillie, Mr. T. P. Smyth, and Mr. Farrer, of Bond street, rendered especial service in maintaining the reputation of this great painter, the forerunner and patron of Murillo.

We now glance back to the upper end of the north wall, where the series of German art commenced, facing Italian works of the corresponding

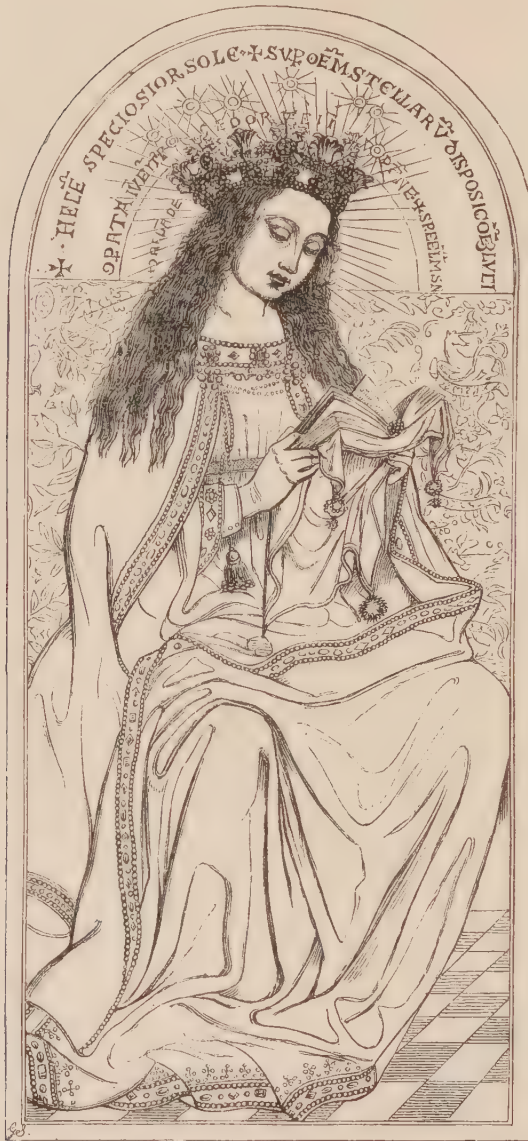
* No. 310. + No. 341. † No. 334. § Nos. 641 and 643. || No. 642. ¶ No. 647.
*² No. 737. †² No. 738.



THE GREAT ALTARPIECE,

By Hubert and John van Eyck, completed in 1432, for the Church of St. Bavon at Ghent. Contributed by L. Lemné, Esq., to the Manchester Exhibition. No. 375 of the Catalogue.

FROM KUGLER'S HANDBOOK OF PAINTING.



"VIRGO SAPIENTISSIMA,"

One of the upper compartments of the Great Altarpiece by the Brothers Van Eyck.
See No. 375 of the Manchester Exhibition in 1857.

FROM KUGLER'S HANDBOOK OF PAINTING.



THE MISERS.

By Quentin Matsys. Contributed by Her Majesty, from Windsor Castle, to the Manchester Exhibition.
No. 445 of the Catalogue.

period. At this point I may observe that, Italian art having existed long anterior to the earliest efforts of the Teutons, all antecedent examples were placed on the cross wall, running north and south, forming, therefore, an isolated range of art, down to the year 1400.

With the fifteenth century German and Flemish art began, and the starting subject at Manchester was a very imposing one.* It presented the entire series of pictures, in their undoubtedly original order of arrangement, forming the great altarpiece, or Retable, in the cathedral church of St. Bavon, at Ghent. This old copy, probably of the sixteenth century, was painted on large sheets of strained canvas, whereas the originals, by the Brothers Van Eyck, having been painted on separate panels, have been unfortunately dispersed. The copy at Manchester afforded the only extant authority, or clue, for their original arrangement.

Of the succeeding period a most valuable series of pictures was contributed by the Prince Consort. Indeed without this bounty and the aid of Lord Carlisle, the Duke of Newcastle, the Rev. J. M. Heath, Mr. Beresford Hope, Mr. J. H. Green, and Sir Culling Eardley, the earlier productions of the German school would have been wanting altogether. At the period of the Manchester Exhibition, not one of the following masters, although great and important in their way, was to be found in our National Gallery catalogue :—Van der Weyden, Meister Stephan, Grünewald, Memling, Wohlgemuth, Mabuse, Quentin Matsys, Martin Schön, Cranach, Lucas Van Leyden, Bernard Van Orley, Burgkmayer, Herri de Bles, Patenier, Horenbout, Van Cleef, Pourbus, Sir Antonio More, and Janet. All these masters were admirably represented at Manchester; a few of these names however had been already familiar to the public who visited Hampton Court. Most prominent among the foregoing pictures were two comparatively small ones, by Memling,† belonging to the Rev. Messrs. Heath and Fuller Russell; the far famed Misers, from Windsor Castle; ‡ an altar piece, by Quentin Matsys,§ contributed by Mr. J. H. Green; St. Peter and St. Dorothea,|| by Meister Cristoph, from Kensington palace, and the universally admired Chef d'œuvre of Mabuse, the Adoration of the Kings,¶ from Castle Howard. The portaiture by Sir A. More, Van Cleef, and Pourbus,

* No. 375—See the accompanying key-illustration of the entire series of this important work, with one portion enlarged, drawn by G. Scharf, and contributed by Mr. Murray.

+ Nos. 397 and 399. † No. 445—See accompanying illustration contributed by Mr. Murray. § No. 416. || No 441. ¶ No. 436.

created no small surprise; but Holbein was seen to less advantage, since many of his most finished works had necessarily been assigned to the series of distinguished persons, in the British Portrait Gallery. Lord Warwick's famous picture* was seen in excellent light, and it was only to be regretted that Holbein's two great pictures, containing large groups of figures, introducing Henry VIII in one and Edward VI in the other, had not been forthcoming from the precincts of the City of London.

The Exhibition was remarkably deficient in the Flemish masters who led up to Rubens and Van Dyck; but of this glorious period little could be devised to increase the effect which saloon B afforded. It will suffice here to mention the fine St. Martin† from Windsor Castle, Lord Darnley's Queen Tomyris,‡ and a scarcely known but immense picture of Juno with the eyes of Argus,§ belonging to Mr. Wyatt, and Rubens and his wife in several pictures. Snyders the great fruit painter, and Jordaens were seen in great truth and brilliancy. Van Dyck's glowing picture of St. Jerome from Charlecote manor fully rivalled his master in intensity; but it was in saloon C, by the side of Rembrandt in portraiture, that he was best seen. The Three Children|| painted by Van Dyck at Genoa, contributed by Earl de Grey, and the King Charles on Horseback,¶ from Windsor castle, formed a magnificent termination to the gallery, and indeed the last-named work afforded an excellent type of all his productions. Most of these pictures were contributed by some long-established family, and generally by the noble descendants of those for whom they had originally been painted. This was indeed a fact remarkable to foreigners, since, notwithstanding the numerous vicissitudes and destruction which have raged at various times, family property has been to so great an extent respected and preserved. Rembrandt was seen at Manchester principally as a portrait painter. A very small but exquisite picture of the Magdalen at the Tomb,*² contributed by Her Majesty, from Buckingham Palace, exhibited the painter's powers with extraordinary effect, and an extensive landscape,†² the property of Lord Overstone, distinctly claimed for him the foremost rank in this line.

Of Dutch landscape, on a large scale, an unequalled series was collected in this part of the gallery. It is not possible to do more than enumerate

* No. 471. + No. 569. † No. 579 § No. 553. || No. 660. ¶ No. 736—See the accompanying illustration, drawn by G. Scharf, jun., and contributed by Mr. Murray.
² No. 842. †² No. 698.

FROM KUGLER'S HANDBOOK OF PAINTING.



KING CHARLES THE FIRST.

By Vandyck. Contributed by Her Majesty, from Windsor Castle, to the Manchester Exhibition.
No. 736 of the Catalogue.



THE TESTAMENT OF EUDAMIDAS.

A Study by Nicholas Poussin. Contributed by the Rev. Thomas Mawkes to the Manchester Exhibition. No. 588 of the Catalogue.

FROM MARKHAM'S HISTORY OF ENGLAND.



PORTRAIT OF RICHARD THE SECOND.

From the Jerusalem Chamber. Contributed to the Manchester Exhibition by the Dean and Chapter of Westminster. No. 15 of the Portrait Gallery.

the names both of their painters and possessors : memory or a reference to the catalogue must supply the rest. Ruysdael, Hobbema, Cuyp, de Koning, Wynants, Van der Velde, Backhuysen, and Van der Heyden. The contributors were Her Majesty, the Duke of Bedford, Worcester College, Lord Hatherton, Lord Overstone, Mr. Holford, and Mr. Henry Hope. No collection in Europe can display superior pictures by the masters than Ruysdael's Bentheim Castle * and Forest Scene from Worcester College, Oxford ; † or the two Hobbemas, belonging respectively to Lord Hatherton ‡ and Mr. Holford § The Cuyps also were superlatively excellent.

Of the French school, after Janet, the most important masters at Manchester were Nicholas Poussin, with his cold classicalities, and Philippe de Champagne, so sternly true to nature. By the former must be remembered the Triumph of Bacchus, a superb specimen contributed by the Earl of Carlisle from Castle Howard ; and a rough sketch of his famous composition, "the Testament of Eudamidas," || which is now more particularly mentioned since the original picture is supposed to have been lost, and this even may serve to afford some clue to it. (See the Plate, from the engraving by Pesne from the original, and printed by Mr. Murray's permission, to accompany these pages). Not one picture by Le Seur graced the Exhibition. His works indeed are rare ; but if the pictures, at one time proffered by Lord Methuen, had not been withdrawn, a very fine specimen might have been displayed.

The Portrait Gallery was an excellent scheme, devised and conducted entirely by Mr. Peter Cunningham. It commenced with the earliest procurable portraits of our sovereigns, although unfortunately with none anterior to Richard II. But the celebrated Jerusalem Chamber Portrait, ¶ once in the south transept of Westminster Abbey, formed a noble beginning. Henry VIII and his descendants were naturally to be seen in extenso. A portrait of Edward VI. as a child with a rattle, by Holbein, *² a half-length of Jane Seymour, and a whole-length of Catharine Parr, contributed respectively by Lord Yarborough, the Duke of Bedford and Lord Denbigh were especially note-worthy. So likewise the small picture on canvas from

* No. 708. + No. 711. † No. 722. § No. 767. || No. 588.

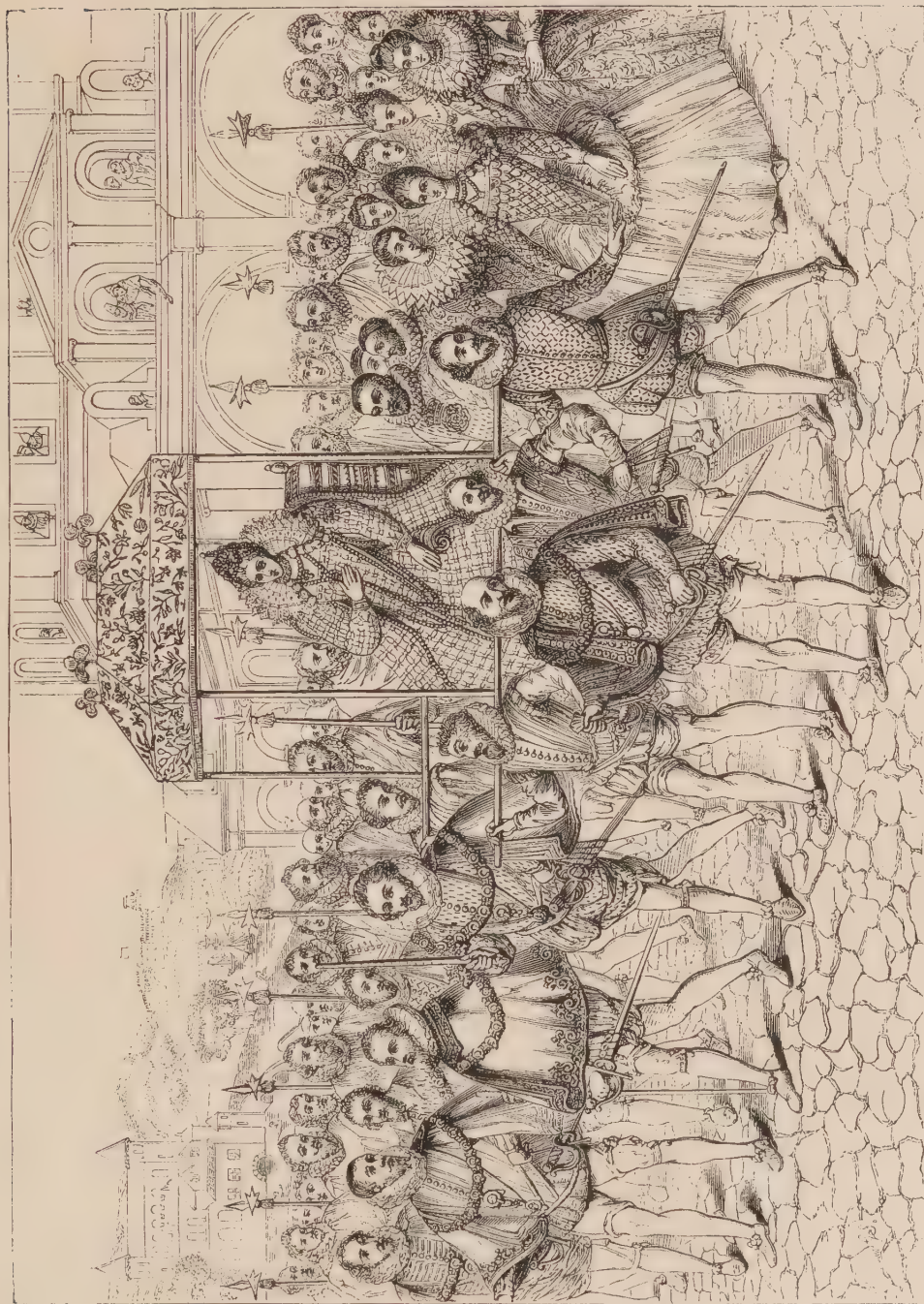
¶ No. 15 of the Portrait Gallery. See the accompanying wood-cut drawn by G. Scharf, Jun., from the original at Westminster, for Mrs. Markham's History of England, contributed by Mr. Murray. *² Engraved by Hollar.

Sherbourne Castle, engraved by Vertue, representing Queen Elizabeth and Court on her journey to Hunsdon House.* The Morton portrait of Mary Queen of Scots was unfortunately not there, but the Duke of Portland contributed a most valuable full-length of her which was very similar in point of personal appearance to the Morton picture and her monument in Westminster Abbey.

We must pass Essex and Sir Christopher Hatton, Raleigh with the map of Cadiz behind him, Lord Burleigh on his mule, and, pausing a moment before the Chandos portrait of Shakspeare, remark that, although now so totally faded and worn out, that canvas possesses a longer and better supported history than any other of the so-called Shakspeares in existence. It is particularly interesting as the actual commencement of the National Portrait Gallery originated by Earl Stanhope.† A very curious full-length picture of Queen Elizabeth standing on a map of England, with the City of Oxford *between her feet*, is a singular performance and very characteristic both of the style and conceits of the period when it was painted. James I was only represented by a small full length (and they are very rare) from the Earl of Denbigh's. Buckingham was several times represented, but once in particular in an oval from Apethorpe.‡ Of Charles I, numerous repetitions were to be seen, especially the large family group belonging to the Duke of Richmond, once in the Orleans gallery, and a duplicate also of the picture at Windsor Castle. A magnificent specimen of Dobson, the successor of Van Dyck, belonging to the Duke of Northumberland, represents the artist himself grouped with Sir B. Gerbier and Sir Charles Cotterel. The Earl of Craven sent some fine pictures of the Palatine family, and the Earl of Clarendon a magnificent full length portrait of Monmouth. Great painters and great subjects from this period become too extensive for any special enumeration. It is, however, worthy of note, that the series included even men of our own century, many still living; and that Mr. Murray contributed largely from his gallery of literary celebrities in Albemarle street. Dance, Copley and Hogarth appeared to great advantage in portraiture; witness especially, the Captain Coram by the latter. Lely, Kneller and Honthorst had also contributed largely

* No. 64 of the Portrait Gallery. See the accompanying wood-engraving drawn by G. Scharf, Jun., and contributed also by Mr. Murray.

† When Earl Stanhope first proposed in the House of Lords the establishment of a National Gallery of Portraits, the late Earl of Ellesmere offered at once to contribute this picture, which he had recently purchased from the Stowe collection. ‡ No. 98.



QUEEN ELIZABETH'S PROGRESS TO HUNSDON HOUSE.

Painted by Mark Garrard. Contributed to the Manchester Exhibition by Lord Digby, from Sherborne Castle, Dorsetshire. No 64 of the Portrait Gallery.

by their works to perpetuate the beauty and fashion of the beauties of their day. Thornhill was only represented by one picture, and that a very fine and touching portrait of Sir Isaac Newton in his old age.

English Art commenced therefore at the upper end of the northern range of galleries devoted to modern paintings, starting from the eastern extremity of saloon D. The earliest and very old fashioned names of Dahl, Aikman, Jervas, Vanderbank, Wooton, Richardson, Hudson, Ramsey, and Hayman deserve mention, because *well authenticated*, signed and dated pictures retained by the families for which they were painted were to be seen here, and afforded the most valuable guides to those who might desire to note artistic ability and styles to the greatest advantage. Hogarth, whose name recalls very different associations, showed also with great power. His admirable portrait of Captain Coram* has been already mentioned. His Sigismunda,† contributed by Mr. Anderdon, was an instance both of the false taste and criticism of the day and of the artist's misapprehension of his own powers. There was no specimen of his series of moral paintings such as may be seen in the National Gallery and Sir John Soane's Museum; but the pictures of Southwark fair,‡ the march to Finchley,§ and a scene from the Beggars' Opera as first performed in 1729,|| belonging respectively to the Duke of Newcastle, the Foundling Hospital and Mr. Murray of Albemarle street, exhibited to a great extent the fashion and manners of the day under the painter's fullest powers of satiric portraiture. Wright of Derby claims recognition for the truthfulness of his portraits, and few indeed could be pointed out of greater interest than the picture of Rousseau by candle-light¶ when staying at Wotton in Derbyshire, now the property of Sir John Boileau. Wright's later fancy of painting fire-light subjects was extensively illustrated by Lord Overstone's grand picture of the siege of Gibraltar.*² Wilson, in his rich blue calm scenes charmed to a great extent. His Niobe,†² contributed by Mr. Wynn Ellis, the Vale of Llangollen,‡² belonging to Mr. E. Lloyd, and a landscape§² painted for John Hunter, now treasured by Mr. W. Entwisle, were certainly among the most pleasing. Wilson also appeared as a portrait painter in one picture contributed by the Royal Academy.||² Gainsborough burst upon

* No. 30 of the Modern Masters. † No. 21. ‡ No. 31. § No. 26. || No. 25.

¶ No. 84 A. *² No. 81. +² No. 32. †² No. 38. §² No. 41. ||² No. 167.

the world by means of this exhibition in quite a new phase. Hitherto the public generally had only known him as a painter of rich and bold landscapes. Here he rose in figure painting to such an extent as fairly to divide the palm of attraction with Sir Joshua Reynolds. His Blue Boy,* long known to artists as the practical result of a frequently repeated anecdote, held the post of honour in these northern galleries correspondent with that of the Windsor King Charles on horseback among the ancient pictures. Lord Westminster did indeed render a great service to art by permitting this fine work to grace the Exhibition. Scarcely less gracious was the contribution by Mr. Graham, of the full length portrait of Lady Lynedoch,† which formed the pendant to Sir Joshua Reynolds's Mrs. Pelham feeding chickens‡ belonging to Lord Yarborough. Gainsborough's portrait also of Mrs. Siddons§ when very young, possessed of course a strong double interest. Had Lord Westminster also bestowed on the Manchester Exhibition Sir Joshua's sublime work of Mrs. Siddons as the tragic muse, he would have established a fair balance in favour of Reynolds compared with the "blue boy." His Lordship is certainly fortunate in being the holder of two of the very finest pictures England can boast by these masters. And before passing entirely away from the works of Gainsborough, I may be pardoned for quoting the remark made to me by a foreigner of very high rank and deeply versed in the study of pictures generally, because it may serve to illustrate one at least of the impressions conveyed abroad by the late exhibition; "we have seen to-day that you possess in England a portrait painter well deserving to rank with Reynolds, and whom, hitherto, we have only known on the continent as a landscape painter—Gainsborough." Of the Sir Joshuas both on these walls and in the Portrait Gallery, it is impossible to offer any particular selection; suffice it to say, that besides those already named, Lord Spencer, the Marquess of Hertford, the Royal Academy and Mr. Tollemache contributed the finest specimens. Copley again was an artist little known to the generality of picture-viewers. His death of Chatham in the National Gallery has, it is true, long been exhibited to the public; but at first sight it is an unattractive picture, and seems merely to present a mass of heads. At Manchester his picture of the Death of Major Pierson,|| contributed by his son Lord Lyndhurst, held a very high position; so, likewise, did an

* No. 156. † No. 157. ‡ No. 155. § No. 74. || No. 112.

“Incident in the Life of Sir Brook Watson,” from Christ’s Hospital. It was inconveniently attractive, since being placed near the turn of a narrow and much frequented staircase, throngs of persons collected to gaze at the man and the shark as well as to read an unusually long description on the frame before passing on. It is a picture that most undoubtedly merited an important position in saloon D. A picture of the Tribute Money,* also by Copley, was less original and satisfactory, but notwithstanding good and very superior when compared with similar imitations of the old masters by President West, whose two pictures of the Death of General Wolfe† and the Battle of La Hogue, ‡ contributed by Her Majesty from Hampton Court and by the Marquess of Westminster from Grosvenor House, were of superior merit and displayed indeed no small affinity to those of Copley already specified.

Romney, great especially in portraiture, may be advantageously remembered, by a charming picture§ of the thirteenth Earl of Derby and his Sister, contributed by the Earl of Derby; a portrait of Lady Broughton,|| a full length belonging to Sir Philip Egerton, the most mellow and beautiful picture I remember from his hands, and of Lady Hamilton, Romney’s especial study and “Goddess of Beauty,” contributed by Lord De Tabley. Of other eminent artists of the *old school* it is impossible to do more than name Zoffany, Fuseli, Louthembourg, Stubs, Morland, and Northcote.

Barry, however, claims a special exception, since his struggles for historic art in the days of Reynolds and Gainsborough are well known, and his pictures still remain comparatively difficult of public inspection. His immense pictures in the assembly room of the Society of Arts in the Adelphi, London, are perhaps more celebrated on account of the circumstances under which they were produced, than for any especial amount of artistic merit which they possess. They are notwithstanding fine works, the evidence of an original spirit, and may be regarded as the first heavings of a mind that led the way to artistic liberty and independence. Those who have turned over the pages of Barry’s life, will remember to have frequently met with allusions to his great picture of Pandora. It disappeared, and has but recently emerged from comparative obscurity, being now the property of the Manchester Royal Institution, by whom the picture ¶ was deposited among the Treasures of Art collected at Old Trafford. Artists of the suc-

* No. 108. † No. 115. ‡ No. 109. § No. 125. || No. 77. ¶ No. 158.

ceeding age, Lawrence, Harlowe, Bird, Owen, Raeburn, Stothard, Daniel, Nasmyth, Smirke and Westall, were clearly recognizable by their peculiarities ; and their successors again, now alas, also taken away from us, Bonnington, Etty, Calcott, Wilkie, Turner, Collins, Constable, Newton, and Müller, were never seen to greater advantage than by these *selected*, and, it may also be said, *time-tested* pictures placed in good light and impartial relation to each other.

Haydon, one of this period, although apart from his contemporaries in many respects, afforded several examples of his dashing efforts to regenerate what he considered high art. His great picture of Macbeth, No. 241, so often mentioned in his autobiography, and one which reflects so much credit on that excellent amateur painter and true patron of art, Sir George Beaumont, occupied a very prominent place ; but his no less immense picture of the Judgment of Solomon, No. 280, now the property of Sir Edwin Landseer, is far more favourable to his professional reputation. His smaller picture of Æneas and Anchises, No. 303, contributed by the Rev. Frederick Leicester, was also a very favourable, and at the same time characteristic, example of his powers. The Mock Election, contributed by Her Majesty the Queen, No. 421, exhibited a singular combination of the spirit of the day with Haydon's personal situation, and served to shew that had he bestowed time and care on such subjects, he might have become a very genial painter of ordinary human nature under a humourous aspect.

The Royal Academy of Arts, it must be acknowledged, contributed most essentially to the success of the range of modern art, by consenting to the display of all their diploma pictures from the period of the foundation of the Academy.

As every artist and sculptor, on being elected an Academician, is required to deposit a picture or work of art by his own hand in the council room, a very important series has been formed. Many of the finest English pictures and sculptures at Manchester, of the earlier times, were derived from this source.

Foreign modern art was not extensively illustrated : a few excellent works, however, by Ary Scheffer, De Keyser, and Overbeck, were to be seen, but a much more extensive series was indeed a desirable point in the Exhibition : nor was the locality assigned them deemed sufficiently honourable.

Saloon F was devoted exclusively to the finest paintings of living artists, and it is not too much to say that *here*, of all parts of the exhibition, was to be seen the most unalloyed enjoyment on the part of the general visitors. Sir Charles Eastlake, Sir Watson Gordon, Sir Edwin Landseer, Stanfield, Danby, Webster, Leslie, Linnell, jun., Grant, Lee, Creswick, Mrs. Carpenter, Elmore, Bright, Maclise, Egg, Roberts, Frith, Dyce, Ward, Herbert, jun., Goodall, H. Hunt, Millais, Lance and Ansdel, certainly held the foremost places, and great pleasure seems to have been excited in the numerous opportunities which these collections afforded the visitor of renewing acquaintance with favourite pictures long since remembered at our London Annual Exhibitions. This indeed may be regarded as the only exhibition of modern art, free from pictures executed *expressly* for it. Time and the artist's own matured opinion, combined with the impartial opinion of those who formed the local executive committee, had a most powerful effect in producing these good results. On Foreigners especially the impression sank deepest, and those who came and went expressed the fullest conviction that England not merely now possesses a high and independent school of art, but that one has long existed, which nothing but national prejudice and want of fair display have kept so densely concealed.

In two instances the Committee of the Exhibition deemed it advisable to keep certain contributions or "properties" (as the sale catalogues would say) distinct from the rest. The Marquess of Hertford stipulated expressly that his forty-four fine pictures should be kept together, and they were accordingly assembled on the northern side of the large square apartment called Saloon H, the remaining walls of which were occupied with a collection of the choicest Dutch cabinet pictures from various contributors. The Soulages collection was also studiously kept together, for the purpose apparently of enabling the public to judge of its extent and independent value.

From modern art and painting generally, we pass to the Gallery of Original Drawings and Engravings, a kindred department, and still pictorial, although, in consequence of the absence of colour, less attractive. Unfortunately the amount of treasures accumulated there was little understood by the crowd of visitors who daily swept by them at the time the music was about to commence.

Of all departments this most especially required placarded directions and written explanations. On the present occasion, only a few, of course, of the most leading features, whether for merit or rarity, can be specified.

The collection of original drawings—the first rough indications of the conception of many of the finest pictures in the world; for such was the only form in which the artists could note down their rapidly passing thoughts—were left in almost total disregard. The library of Christ-Church, Oxford, contributed some of its choicest original sketches by Raphael and Leonardo Da Vinci: Sir John Hippley, also, sent superb studies by Raphael and Giorgione, whilst Mr. Ford enriched the series with Spanish drawings by Murillo and Alonzo Cano, and three studies of considerable importance by Parmigianino. But the gems of Dr. Wellesley's collections at Oxford imparted the chief glories to this department. From his exhaustless stores he poured out an historic series of original drawings by early and late masters, and exposed to view a mass of sketches by Titian and Claude, hardly to be matched in the rest of the world. The Claude drawings are far superior to the sketches forming the celebrated “*Liber veritatis*” belonging to the Duke of Devonshire, inasmuch as these are careful studies made preparatory to painting his pictures, and those in the “*Liber veritatis*” were hurried transcripts taken, sometimes at the last moment, with the mere object of preserving a rough record of the composition as the picture was about to leave his hands. The drawings by Canaletto were also bold and vigorous in the extreme, and served to afford many curious illustrations of ancient Venetian topography. Dr. Wellesley's early Italian drawings comprized one of special interest, the first thought, by Ghirlandajo, for his celebrated fresco in Santa Maria Novella at Florence, the “*Birth of the Virgin*,” in which possibly his pupil Michael Angelo rendered him assistance. Early sketches by Raphael and Perugino contrasted remarkably with the dashing pen and ink style of Donatello and the majesty of Buonarroti, of whom there were many examples; but two or three drawings by Raphael, once in the Rogers collection, contributed by Mr. Birchall, and a sketch of “*Boys at Play*,” from Oxford, exhibited Raphael in all his mastery. A small cartoon exquisitely finished in bistre, by Gaudenzio Ferrari, and the property of Dr. Wellesley, formed a friendly link between the sketch-book, leaf-size of the above-named, and the large scale of the working cartoons, fresco-size, ranged above them. Fragments of some of Raphael's cartoons

which, unlike the seven now at Hampton Court, had been torn to pieces, were contributed from Christ Church, Oxford, and Althorp in Northamptonshire. A selection also of some very fine large cartoons, with figures of boys of stupendous size, by Correggio, for some of his cupola frescoes at Parma, exhibited wonderful power united with delicacy. They belonged to Mr. Hertz, whose name has been for many years familiar to lovers of art; but more especially for his collections of antiquities. An immense cartoon, one half in fact of the central compartment, by Annibale Caracci, on the ceiling of the Farnese palace at Rome, was hung on the wall of the principal hall near the southern ascent to the clock gallery. This extensive mass of paper (corresponding in scale of the figures to those on the cartoons presented by the late Lord Ellesmere to the National Gallery), was actually used to trace the painter's outline on to the mortar, and was peculiarly adapted to render detailed information to those who desired to study minutely Caracci's technicalities. This important work of art was liberally entrusted to the Exhibition from Marbury hall, by the late Mr. Smith Barry, who had been indeed the first to recognise in it the composition of Annibal Caracci. Until that period the cartoon had always been spoken of as a work by Raphael.

Some very spirited and poetical designs in black chalk by Romney, from the Liverpool Royal Institution, displayed extraordinary power; and a wild design of Fuseli, and a vigorous but mannered composition by Gibson, were deposited also by the same proprietors.

It is now high time to pass in mind through the narrow spaces enclosed in walls of engravings, which were ranged, as nearly as possessorship seemed to allow, in chronological order.

When it was first determined to form a Special Gallery of Engravings, the subject was referred to Mr. William Smith, late of Lisle Street, whose extensive knowledge of engravings and influence with various holders in private collections were well known, and to Mr. Dominic Colnaghi, who had already prepared for his own gratification a large and instructive series of the works of the leading engravers from the very commencement, and who ultimately took a very prominent part both in forming the collection and inducing holders of the rarest gems to support it.

The origin of printing from the practice of engraving on metal plates is by this time very generally known. As long as engraving on

metal was the *final* object, the hollowed lines graved into the metal were filled in with a black substance so as to make the workmanship more distinct and more permanent also. The first impressions were taken by the engraver, not of the engraving in printing ink only, but of the entire plate, as from a seal, in plaster or melted sulphur. A counter impression having been taken, the corresponding hollow lines were blacked in, and this *duplicate* was retained by the workman as a fac-simile and specimen of his ability. Sulphur impressions of this nature are indeed rare: only a few are in the British Museum; whilst at Manchester not one was to be seen. Delicate rubbings with printing ink on soft paper seem occasionally to have been taken from some of these sulphurs, and others also from the engraved plate before it was finally filled in with the black metallic substance called *Niello*. Plates so finished were called *Nielli*, and they are frequently mentioned in Vasari's account of Maso Finiguerra the goldsmith, and others who made the first discoveries in multiplication of designs by printing from engraved plates. In the Museum at Florence is preserved a silver niello plate, called a Pax, engraved with the device of "the coronation of the virgin." In the British Museum is the sulphur duplicate from it, which had, during progress, been taken and filled in with paint *before* the Florentine one had received the metallic black; and in the Louvre is a paper impression taken between the two operations when the metal had somewhat more engraving on it than the sulphur exhibits. Each different museum thus affords a distinct illustration of the process, and serves to confirm a passage of Vasari, who mentions this very Pax. It was paid for, according to the still existing church accounts, A.D. 1452.

There were at Manchester several delicate impressions taken from silver plates destined to receive niello; and these nielli prints, *Proofs* they might truly be called, were attributable to Finiguerra, and are of the utmost rarity. Mr. R. S. Holford is the fortunate possessor of these priceless treasures; but in their frames in the gallery they appeared no more than small grey specks upon a broad sheet of white paper. Among them the most beautiful was an Adoration of the Magi, surrounded by smaller medallions and an impression from the "Coronation of the Virgin" on the Florentine Pax above alluded to.

These silver plates were succeeded by engravings on copper by some of the first essayists who worked upon the metal, for the taking of impressions

FROM GUIZOT'S FINE ARTS.

Translated by George Grove.



THE FIVE SAINTS.

From an Engraving by Marc Antonio, after a design by Raphael.

now became the express aim and end of their labours. Baldini and Botticelli, already distinguished painters, devoted themselves readily to the new process. Baldini's series of engravings of the Triumphs of Petrarch, of the utmost rarity, were contributed by Dr. Wellesley, Mr. Palgrave, and Messrs. Evans; and by the same artist was to be seen an extraordinary engraving of the Preaching of the Fra Marco, indicating the foundation of the Mont de Piété, and an engraving of Christ from the "Monte Sancto di Dio," dated 1477, and the first engraving ever used as a book-illustration. These rare works are the property of Dr. Wellesley and Mr. E. Cheney. The great Italian masters Pollajuolo, Andrea Mantegna, and Mocetto were seen at Manchester in full vigour; and the series of Marc Antonio, Bonasone, and the Mantuani were almost unrivalled. Of Marc Antonio, whom Raphael especially employed, even surrendering one of his own workmen for his especial assistance, the productions were of uniformly first-rate excellence and too numerous to admit of anything like particular enumeration. Perhaps, however, the very finest, clearest, and rarest of all these superlative brilliances were "The Judgment of Paris," belonging to Professor Johnson of Oxford; "Peace," Dr. Wellesley; "The Pest," Mr. Holford; "Aretino," Mr. Cheney; "The Five Saints," * Mr. Holford; "Massacre of the Innocents," Mr. H. Hawkins; "The Martyrdom of St. Lawrence," Mr. H. Hawkins. All these were either unfinished proofs in rare states or unique condition. Bonasone was almost as peculiarly the engraver from Michael Angelo, as Marc Antonio was from Raphael. For the superiority of this collection, the principal thanks were due to Mr. Hawkins, of Bignor, Dr. Wellesley, the Rev. J. Griffiths, Mr. Holford, Mr. George Smith and Mr. St. John Dent.

Among the engravings by early Germans, Martin Schön, Israel van Meckenen, Lucas van Leyden and Albert Dürer, were most prominent. Here the aid of Mr. R. Fisher, Mr. C. S. Bale and Mr. Felix Slade was of especial value.

Rare historical engravings belonging to our own country naturally commanded a greater interest. Queen Elizabeth, in the dress in which she went to St. Paul's, James I. and the Prince of Wales, Anne of Denmark,

* See the accompanying engraving, from Marc Antonio's "Five Saints," drawn by G. Scharf, and contributed by Messrs. Bosworth and Harrison from "Guizot's Fine Arts."

all by De Pass; Goltzius's fine engraving of the boy Frisius and his Dog; Elstrack's Mary Queen of Scots and Darnley; Delft's Elizabeth of Bohemia; Faithorne's engravings of the period of Charles II., especially an early map of London dated 1658, contributed by Messrs. Evans of the Strand. An unparalleled series of Hollars and Nanteuil's brilliant performances, including John Evelyn and other portraits, occupied their respective places among etchings and engravings.

Strange, Woollett and Sharp, engravers in whom the English feel a just pride, were worthily displayed at Manchester in works from Titian, Guido, Claude and Wilson. The principal contributor of these works was Mr. Felix Slade. Raphael, Morghen, Müller, Longhi, Desnoyers and Anderloni, verging on modern times, are the last who can be enumerated. Of Volpato I observed no specimen.

Rubens, like Raphael, created a school of engravers, of whom the most prominent were Vorsterman, Bolswert, van Thulden, Pontius, and Soutman. Poussin, likewise, had his followers in engraving, of whom Audran and Pesne were the first and most characteristic. Wille also deserves particular remembrance for his fine and brilliant paintings by the Dutch masters. The chief part of this extensive series was contributed by Mr. Lewis Loyd.

Another branch of engraving, of nearly equal importance and more closely allied in fact to typography, is wood engraving. The art of engraving blocks of wood, for the purpose of yielding impressions, was coeval with the invention of chalcography. A few pages from the early block-books, and some primitive playing cards marked the infancy of the art. The famous 1423 wood-cut, however, of St. Christopher, (the earliest known with a date), belonging to Lord Spencer, was not exhibited. An extensive series of wood-cuts, giving the effect of original coloured drawings by means of impressions of several wood-blocks, invented by Ugo da Carpi, were there: many of them representing Raphael's cartoons and other well known compositions. Designs also by Titian were recorded through this process by AndreaniVavasori and Scholari. No. 1389, (numbered 50 on the frame), was a magnificent Procession after Titian, emblematical of the triumph of the church. The "Orpheus" by Pilgrim, the supposed inventor of these chiaroscuro printings, was also there, but it bears no date. Some striking life-size portraits in black and white, looking like pen and ink drawings, were remarkable from their truthfulness and

vigour, especially the bold profile of the Sultan Solyman with an unusually tall cap encircled by four crowns, and a large medallion portrait of Pope Julius II. by Burgkmayer. A great map of Venice, dated 1500, attributed to Albert Dürer, but more probably by an Italian artist, is often referred to as an authority on topographical matters.

Albert Dürer, equally great in wood engraving as in etching and all other branches of design, was represented by many examples in the first department. On this occasion it is only possible to name the colossal head of Christ; complete sets of the Apocalypse; the Life of the Virgin; the Passion, and the Triumphal Car of the Emperor Charles V, executed by Burgkmayer. The Triumphal Arch of Maximilian, dated 1515, was composed of a great number of separate plates admirably joined by Messrs. Colnaghi for this express occasion. Here again, and in all the instances above specified, Mr. William Russell was the liberal contributor. Holbein's dance of Death, a fine series contributed by Mr. Fisher, and the Maze were not such novelties, as far as subjects are concerned, on account of the numerous and cheap copies disseminated to the less experienced students of this branch of art. These impressions, however, were in remarkably fine states. The influence again of Rubens upon wood engraving was to be seen in Jegher's bold engraving of the Garden of Love.

Early attempts at printing in natural colours should not be passed over. They were made by Kirkhall of Sheffield, who flourished in the first half of the eighteenth century. Mr. William Russell and Mr. Cheyney exhibited specimens of his art. Bewick, Linton, Thomson and Orrin Smith are the best known modern names, and their works were well and numerous represented.

The greater part of the exquisite modern engravings, including French, German and Italian, contributed by Mr. Lewis Loyd, the Duke of Portland and Mr. Felix Slade were deposited in the southern galleries. Near the miniatures and enamels towards the gallery steps were arranged a cluster of the earliest mezzotinto engravings. The very first of these, by Colonel Furstenburgh, Count van Siegen and Prince Rupert, variously dated from 1643, are wonderful indeed as first attempts. Van Siegen's engraving was taken from a painting by Honthorst.

Etching, on a bold, large scale, was practised by many of the great masters, both of their own designs and from admired pictures by others.

In this style Albert Dürer, Agostino Caracci, Rembrandt and Van Dyck were preeminent.

Among Rembrandt's own etchings, which according to their various states command such an extensive range of prices, the following deserve special enumeration :—

The Sabre Print in three states, and after the plate was cut ; Rembrandt himself in a turned-up hat ; the hundred guilder piece of Christ healing the sick ; the Shell in first and second states ; Van Tolling, Old Haaring, Renier Anslo, Ephraim Bonus, the Gold-weigher (in four states), Coppenol, The Burgomaster, Six ; the Gold weigher's field ; the Three Trees, the Ecce Homo, and Rembrandt's Mill, dated 1641. Of all these the greatest part and the very finest belonged to the Duke of Buccleuch. The rest were contributed by Mr. Holford, Sir C. Price, Mr. Fisher, Mr. Smith, and Mr. Brodhurst. A unique proof of Waverus etched by Van Dyck was contributed by Mr. S. C. Bale.

Other etchings by Ostade, Paul Potter, Berghem, Rosa da Tivoli, Claude and all the illustrious Dutch painters of that period were displayed in profusion. On the opposite wall, near the stairs,—in continuation, it may be said, of the earliest attempts at mezzotint,—was an unrivalled series of large engravings in the same process from the most effective pictures by Sir Joshua Reynolds. Here indeed the wonderful variety and originality of the great painter were most strikingly to be seen. All his largest, finest full-length compositions were collected here in the full brilliancy of artist's proofs. For this treat again the public were indebted to the Duke of Buccleuch. The principal engravers in this series were T. Watson, Hodges, Dunkarton, Dixon, Dickenson, M'Ardel, J. Raphael Smith, V. Green, Doughty and Ward. In the same process, but varied to an incredible extent, was also to be seen a large series of plates, (many of them the same subject in various states,) frequently worked upon experimentally by the artist's own hand, printed in deep brown colour, and forming the plates to Turner's *Liber Studiorum*. As they lined the screens on that side of the gallery which the music-listeners frequented, they obtained but little notice. In the same gallery, but more directly under the large southern window, was an extensive and interesting display of printing in colours, architectural drawings, &c. The latter included several antiquarian restorations of deep research, and admirably coloured

views of foreign architecture, which not only merited but required some special explanation. None, however, was afforded in the catalogue.

These coloured drawings lead us naturally down into the galleries at the extreme western end of the building which were devoted expressly to water colour. In descending the steps, however, the eye was arrested by a large number of photographic portraits of celebrities, and a collection of lithographic prints, a process which certainly deserved a somewhat more extensive illustration than it obtained among the Art Treasures. Of all processes of printing and engraving, the use of stone is the most recent, unless, indeed, we except the vague and at present undefined attempts that are being made with regard to printing from plates by photography. Mr. R. Lane, the eminent lithographer, contributed a collection of the first attempts at lithography in England; one, a landscape, was signed 1804, and another "R. Hill, 1807." Sennefelder, a German of Bavaria, was the original inventor of the process, and lived to see it carried to wonderful perfection.

Entering now, in mind, the long and principal gallery of water colour art, we remember especially John Lewis's magnificent pictures of the "People at Rome, assembled to receive the Papal Blessing," and the "Englishman encamped in the neighbourhood of Mount Sinai;" "Roberts's views in the Holy Land;" Cattermole's rich and romantic subjects; Carl Haag's refined renderings of rustic figures; Louis Haghe's daylight and real representations of foreign scenes and living people among them; Cromek's Italian atmosphere; Cox's pure air and mountain scenery; Hunt's matter-of-fact, but unrefined, portrayal of rude simplicity; Edward Corbould's theatrically artificial scenes; Nash's rich and historically architectural records; Collingwood Smith's manual facility of colour; S. Cooper's truthfulness in cattle; Tayler's richness and power of grouping; Topham with corresponding power in subjects of a ruder class; Clarkson Stanfield's fresh air subjects, but always most genial when in the neighbourhood of the sea. These are only a very few of the abundant and purely English excellencies which covered the walls of this spacious hall. But out of this main hall again branched three smaller apartments, each of which was devoted to an especial service, and from which it was hardly possible for any one to emerge without deriving a much more exalted notion of the power, stability and extent of our water colour practice. The first room traced the art back to its comparative infancy in the low countries. As a foundation of this valuable historical series, Mr. William Smith placed at

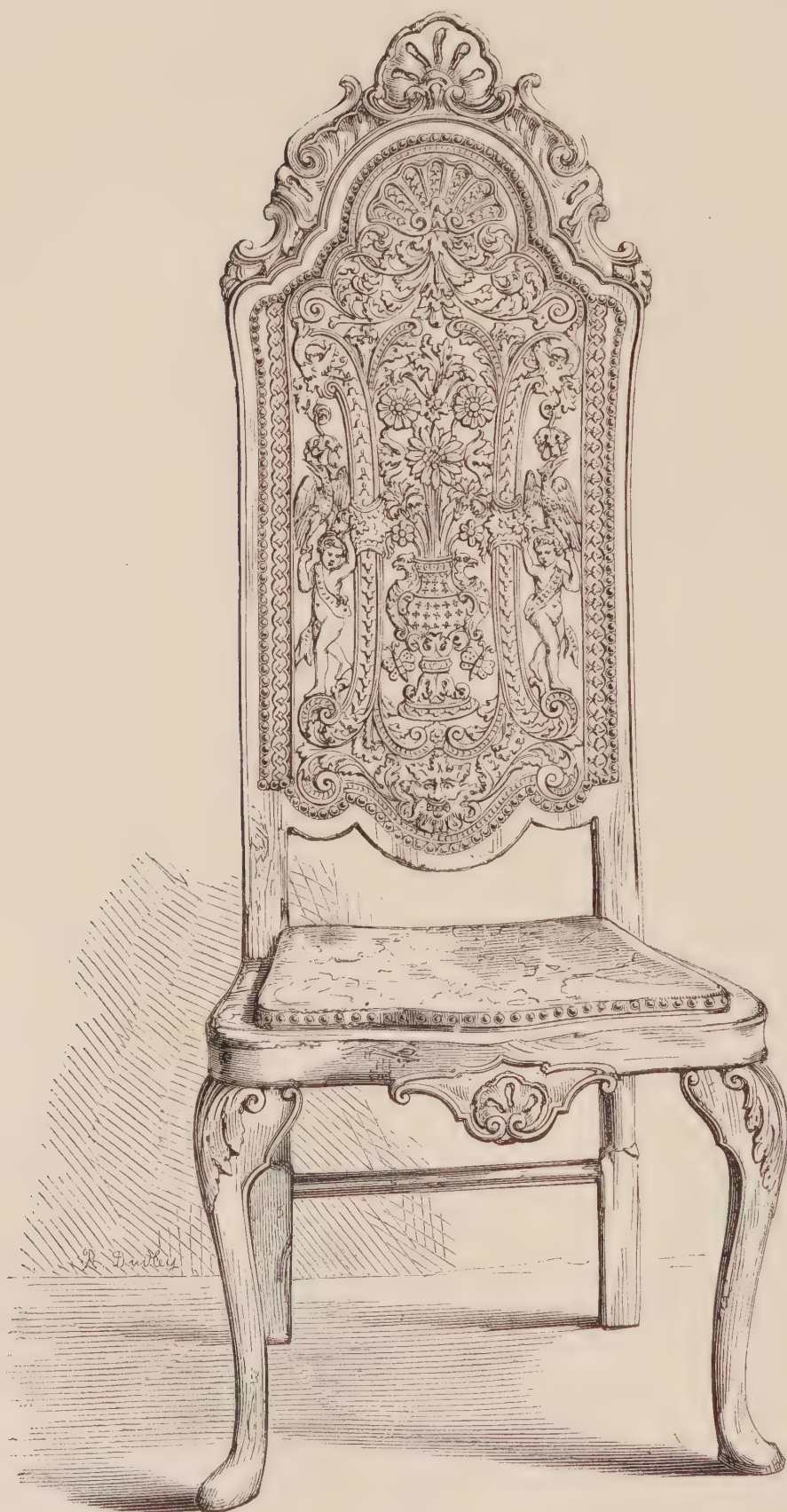
the service of the committee his rich collection of water-colour drawings, which he had formed and always intended to illustrate the growth of the art from the earliest times, and, in addition to this, a numerous list of collectors sent abundant support. Among these the most liberal were Her Majesty the Queen, The Royal Academy, The Dowager Lady Ellesmere, Mr. William Russell, Mr. John Henderson, Mr. Henry Cheney, Mr. John Pender, Mr. William Sandby, Mr. Thomas Birchall and Mr. T. Griffiths.

Solid *opaque* water colour painting, called *tempera*, or distemper painting, had been long in use; but *transparent* colouring, to be modified by the addition of water only, was comparatively an innovation. Transparent tints laid on with this medium had been used to gratify the commonalty, to enrich the earliest woodcuts in the pages of the block books, playing-cards, and various ecclesiastic devices. In the most beautiful of the Flemish miniatures, these transparent colours were employed to shade and heighten the brilliancy of folds and features, after having been first laid in with a more opaque and solid paint, namely, the *tempera*. As far back as the 16th century, Albert Dürer appears to have employed transparent colours for tinting large surfaces. Several of his works were on parchment; but the first and most decided instances of the use of water colours on paper were shewn in the works of Ostade, Rembrandt, Jordaens, Van Huysum, and Watteau. Our earliest water-colour artists, Paul Sandby, Cozens and Girtin were truly giants, and from their hands many of the finest conceivable compositions were to be seen. And these were followed by an extensive series, all in the same process, enriched and varied by the genius of Gainsborough, Cipriani, Reynolds, Rowlandson, Heaphy, Clennel, Edridge, Blake, Stothard, Flaxman, Barrett, Varley, Dewint, Prout, Martin, Constable, Copley Fielding, Chambers and Wright.

In the second room Turner predominated, and it was here, by comparing his very earliest with his very latest drawings, that a useful lesson might be derived. The range of his views and the changes of aspect in his various scenes were wonderful, and one could only regret, when contemplating his latter and most gaudy drawings, that he could ever have departed from the strength and propriety of his first transcripts of nature. As architectural draftsmen both he and Cattermole acquired the knowledge and practical foundation of their power. In the third room were to be seen

FROM THE ART TREASURES OF THE UNITED KINGDOM.

Edited by J. B. Waring, Architect.



PRESSED LEATHER CHAIR, OF THE EIGHTEENTH CENTURY.

Belonging to F. Leake, Esq.

admirable studies from nature, drawn to perfection in coloured chalks, by Mulready; sketches in Turkey, of a very flimsy nature, by Sir David Wilkie; graceful and delicate compositions, by Flaxman and Stothard, by the former of whom also a few bold pen and ink drawings from the life, belonging to the Royal Academy, deserve especial record. A great number also of sketches made abroad in Egypt and Asia Minor by Müller were of an excellence and interest that claimed far better treatment than they received in the dark position assigned to them near the ground on the screens, since they afforded far more truthful records than either Wilkie's vague hints or the pretending, overloaded and opaque scenes, by the chevalier Hildebrandt taken in similar regions.

The course from these galleries led through the Indian court, which although limited in comparison with the corresponding Department of the Hyde Park Exhibition, excited great admiration, and seems on the whole to have been as generally popular with the manufacturing classes, as any other portion of the treasures amassed for their gratification. The tent in the centre of the room contained superb specimens of furniture, bolsters, saddles, chess-tables, embroideries, turbans, horse-trappings and various kinds of Damascened armour. In cases around the tent were magnificent examples of Turkish arms, pipes, stools and boxes, chiefly contributed by Her Majesty the Queen and the East India Museum. Chinese work, ivory carvings and highly wrought bowls, together with the most beautifully patterned Indian shawls, were sure in themselves alone to elicit admiration; but many objects in the general museum which occupied the remaining available extent of the great nave, required the adventitious aid of labelling and historic explanation, all of which was effected and most admirably arranged, by Mr. J. B. Waring. In the central nave, the necessity of some general classification became at once evident, and the system adopted by Mr. Waring in this respect was certainly one by which the progress of those who desired to study and examine was very materially facilitated. Gold and silver, glass-work and enamels, book-binding and all other leading branches were kept perfectly distinct. They were arranged in very large cases, and the visitors were thus enabled not only to regulate their ideas and institute comparisons, but the system was of the greatest advantage to those persons who were desirous of finding out any particular object.

Among so many objects of such general interest and so varied a nature,

it may become a matter of some difficulty to recapitulate even a few of the most noteworthy objects or principal curiosities. Those however of chief importance and rarity, as they now pass through my mind, were the fine specimens of Venetian glass, contributed by the Duke of Buccleuch, Mr. Felix Slade and the late Mr. Nicholson; the Saxon lantern from the Ashmolean Museum at Oxford; the famous enamelled cup, from the Corporation of Lynn; the beautiful croziers of William of Wykeham and Bishop Fox; the clock which Henry VIII. presented to Anne Boleyn, contributed by Her Majesty, together with the magnificent shield by Benvenuto Cellini, which occupied an isolated case towards the transept. The silvergilt-mounted Nautilus cup, from Windsor Castle, was also a great celebrity. A superb collection of oriental metal work, both in brass and latten, belonging principally to Mr. Rohde Hawkins, and* Mr. E. Falkener, filled one large case, whilst in another of similar size were assembled some of the finest examples of oriental armour, in weapons, trappings and accoutrements.

In these respects indeed the vast contributions of Colonel Meyrick, from Goodrich Court, stood pre-eminent. The universally known volumes relating to ancient armour, by Sir Samuel Meyrick, the colonel's ancestor, illustrative of the collection he had formed, were always regarded as the chief authority on such matters in this country. The book has been copied and recopied, referred to and quoted from without end, but the original materials, the armour itself, at Goodrich Court, could only be seen by a very considerable effort, and inevitably at very great expense. On this occasion Colonel Meyrick generously rendered it completely accessible. The finest part of his collection, through the admirable management of Mr. Deane, was successfully transferred to the Art Treasures' Exhibition at Manchester, where it was advantageously arranged, and most instructively described by the distinguished authority on these matters, Mr. J. R. Planché, of the Herald's College. In addition to these complete suits of armour, contributed by Colonel Meyrick, a large selection of the choicest specimens were sent by government from the Tower of London, by which means a truly unparalleled series of examples was collected. The Earl of Warwick contributed the earliest helmet, Mr. James, of Aylesbury, an extensive collection of spurs, whilst many other important examples were

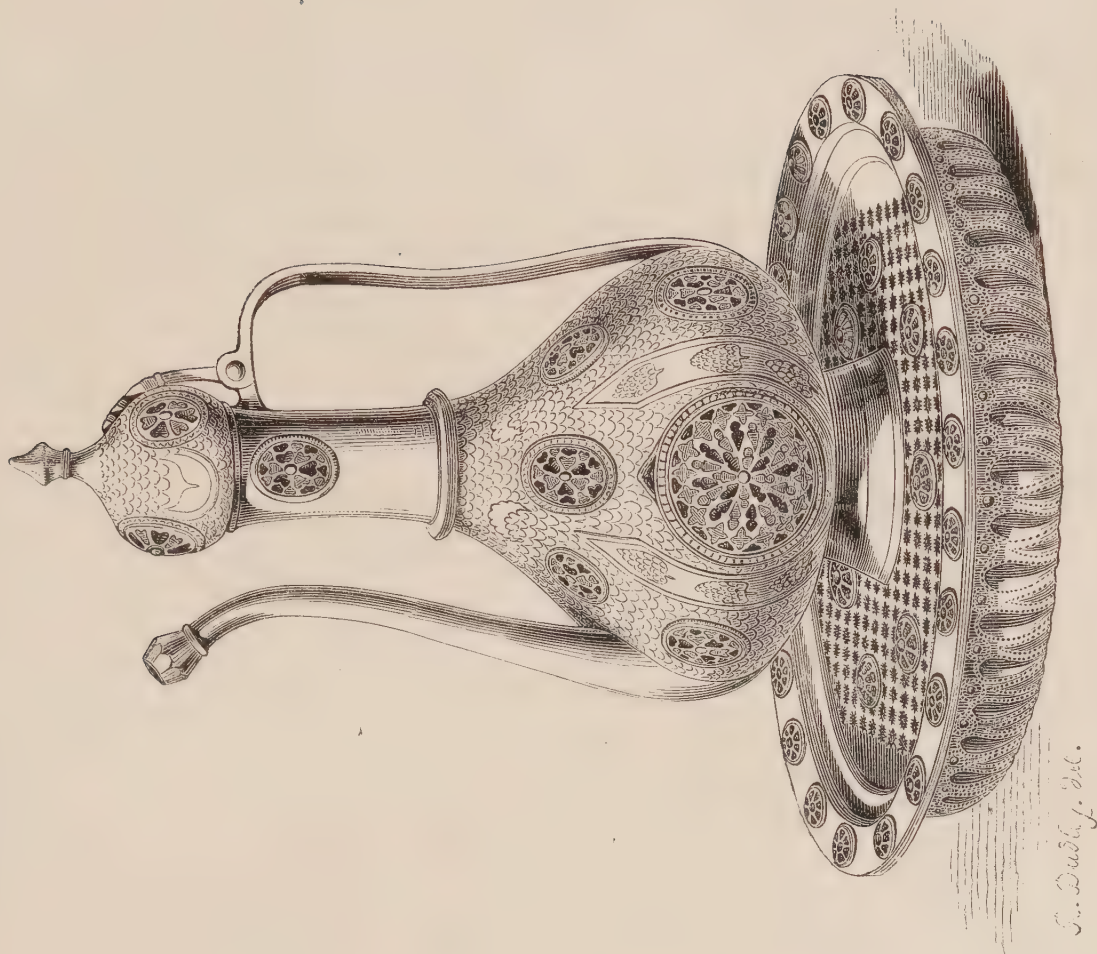
* See the woodcut contributed through the kindness of Messrs. Day.



SILVER FILIGREE RELIQUARY.

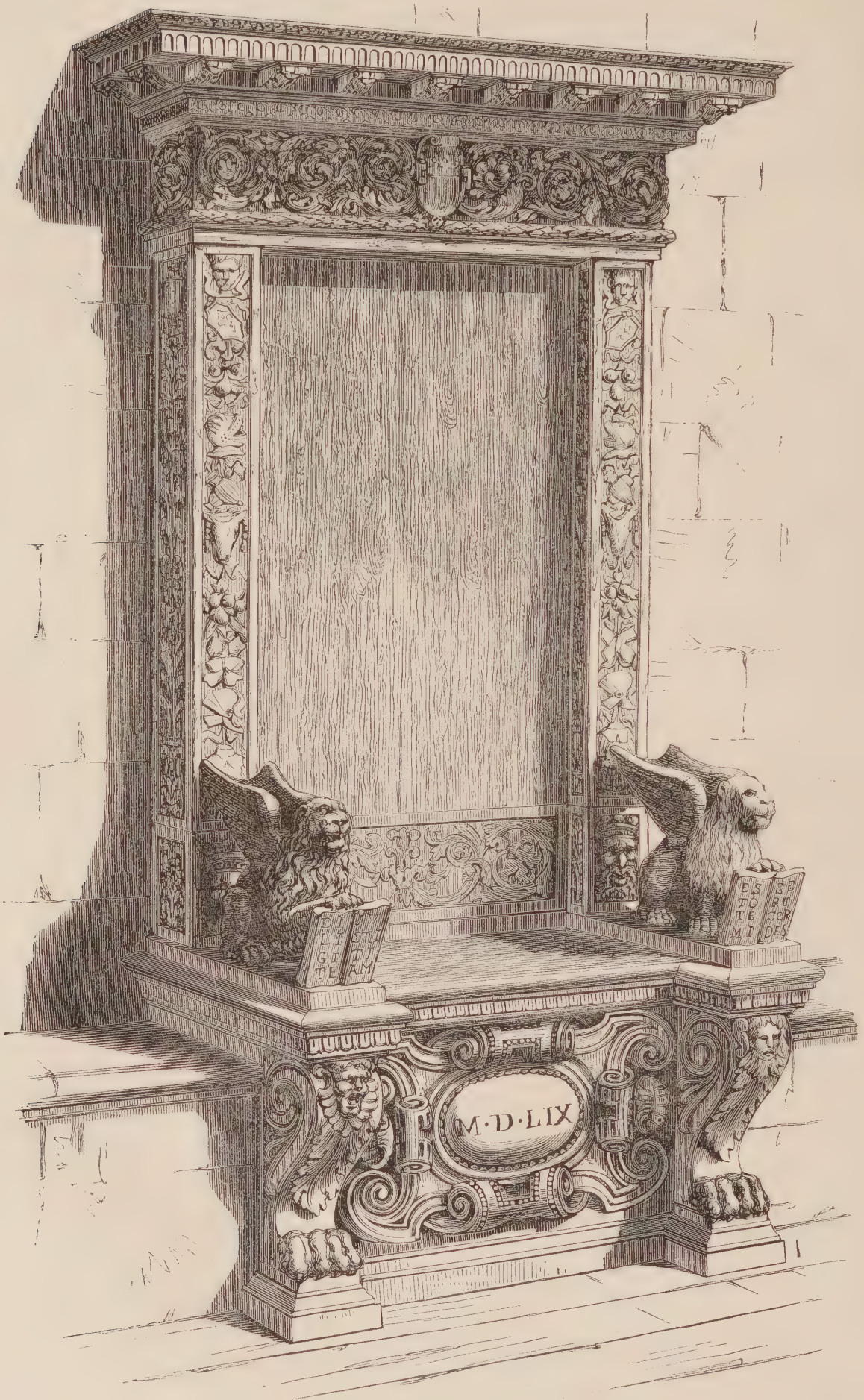
Said to have been dug up in the foundations of St. Paul's, London.

Belonging to Lord Hastings.



TURKISH ENAMELLED COPPER EWER AND BASIN.

Purchased by Mr. Edward Falkener, the former at Smyrna, the latter at Constantinople.



CARVED WOODEN THRONE OF A VENETIAN DOGE. DATE 1559.

Belonging to E. Cheney, Esq

afforded by Her Majesty from Windsor Castle, the Marquess of Hastings, and Lord de Lisle. A fine suit of mounted armour belonged to Sir Henry Dymoke, the hereditary champion of England. Superb examples, indeed, were two suits from the tower, one of the time of Henry VI, the other, fluted, dating from the reign of Henry VIII. Two magnificent suits elaborately ornamented, made for Prince Henry, the son of James I, and for Prince Charles his brother, are of special historical importance. A buff coat of Sir Jacob Astley served to confirm the accuracy of this portion of his portrait exhibited in another part of the building.

A superb half suit, surmounted with a temporarily added, highly wrought, Morion, belonging to Alphonso Duke of Ferrara, was considered by Mr. Planché to be one of the finest in Europe; near it stood an original Italian armourer's anvil, the sides of which were elaborately wrought. Between these objects and the nave were two remarkably fine tilting suits, the figures being mounted on horses in the act of encounter. They belonged to the sixteenth century. In a glass case near at hand was the celebrated ivory cross-bow, of the time of Henry VI, and a curious instrument from which our modern dragoons derive their name. It was a primitive gun made of wood, inlaid with ivory and called a *dragon*. There were also several beautifully wrought couteaux de chasse, and in one case a magnificent display of shields, including the targets of Francis I and the Emperor Charles V, the former executed by Negrolì, the latter by Pacini. On the opposite side, also in a glass case, were finely embossed shields, contributed by the Marquess of Breadalbane and Lord Delamere. There were also a remarkable two-handed sword, with the two cognizances of De Lisle and Warwick, and a superb partizan with highly-wrought staff, said to be a present from the Pope to Henry VIII: these and a halberd, probably used in ecclesiastical processions, were also deserving of special study for design.

Of primitive times, also, one great rarity, the thin bronze coating of an ancient British shield, found in the river Witham, Linconshire, claims remembrance. The central boss was studded with small pieces of cornelian. Near it were placed two other remarkable objects, namely, circular shields or targets, used by the primitive occupants of our island.

From the armourer to the goldsmith of olden times may be considered an easy transition.

Of rich church plate, especially Chalices, Monstrances, Shrines, Patens, Thuribles, and Candlesticks, the chief contributors were Cardinal Wiseman, Dr. Rock, Colonel Meyrick, Mr. Howard of Corby and Mr. Beresford Hope, M.P.

The Corporation plate was collected from New College, Queen's and Oriel Colleges, Oxford; from Corpus, St. John's and Pembroke Colleges, Cambridge; from the civic authorities of York, Yarmouth, Thetford, Chester, Rochester and Lincoln; also from the London companies of the Goldsmiths, Barber-Surgeons, Clothworkers, Mercers and Carpenters. From among the latter of these was to be seen the cup presented by Samuel Pepys, and mentioned in his diary. A very curious collection of watches served to shew the advances made in mechanical workmanship and the wonderful amount of taste which prevailed at an early period in fabricating the cases to hold them. Enamels also, mainly through the assistance of Mr. Danby Seymour, Mr. Beresford Hope and the Earl of Warwick, formed an almost unrivalled collection.

In the earliest examples of enamelling the colours were kept quite distinct and separated from each other by slender walls of gold. These were fixed with wonderful delicacy and precision before the introduction of the fusible vitreous material. Constructed divisions of this nature gave the name *Cloisonné* to the enamel. In the second stage of advancement, the same system of separating the colours was maintained, but the divisions were effected by a different process. The gold surface to receive the enamels was then scooped out into as many hollows as masses of colour were required, leaving the metal between them to form the necessary barriers. This kind of enamel from the process of hollowing was termed *champlevé*.* The third and last process was to paint freely over the entire surface of a flat plate metal, generally of copper, with vitreous colours, blending one with another as in ordinary painting and covering the metal as completely as an artist would his panel or canvas. Of this latest style by Courtois and several other fine artists of Limoges, &c., the most important came from Mr. Danby Seymour's collection.

Of Henri Deux ware, only forty examples being known in the whole world, Sir Anthony Rothschild contributed the most precious specimens.

* See the woodcut from the Art Treasures, contributed to this vol. by Messrs. Day.



ENAMELLED CIBORIUM IN THE COLLECTION OF THE EARL OF WARWICK.



FLEMISH STONEWARE CRUCHE; SEVENTEENTH CENTURY.

In the possession of P. H. Howard Esq.

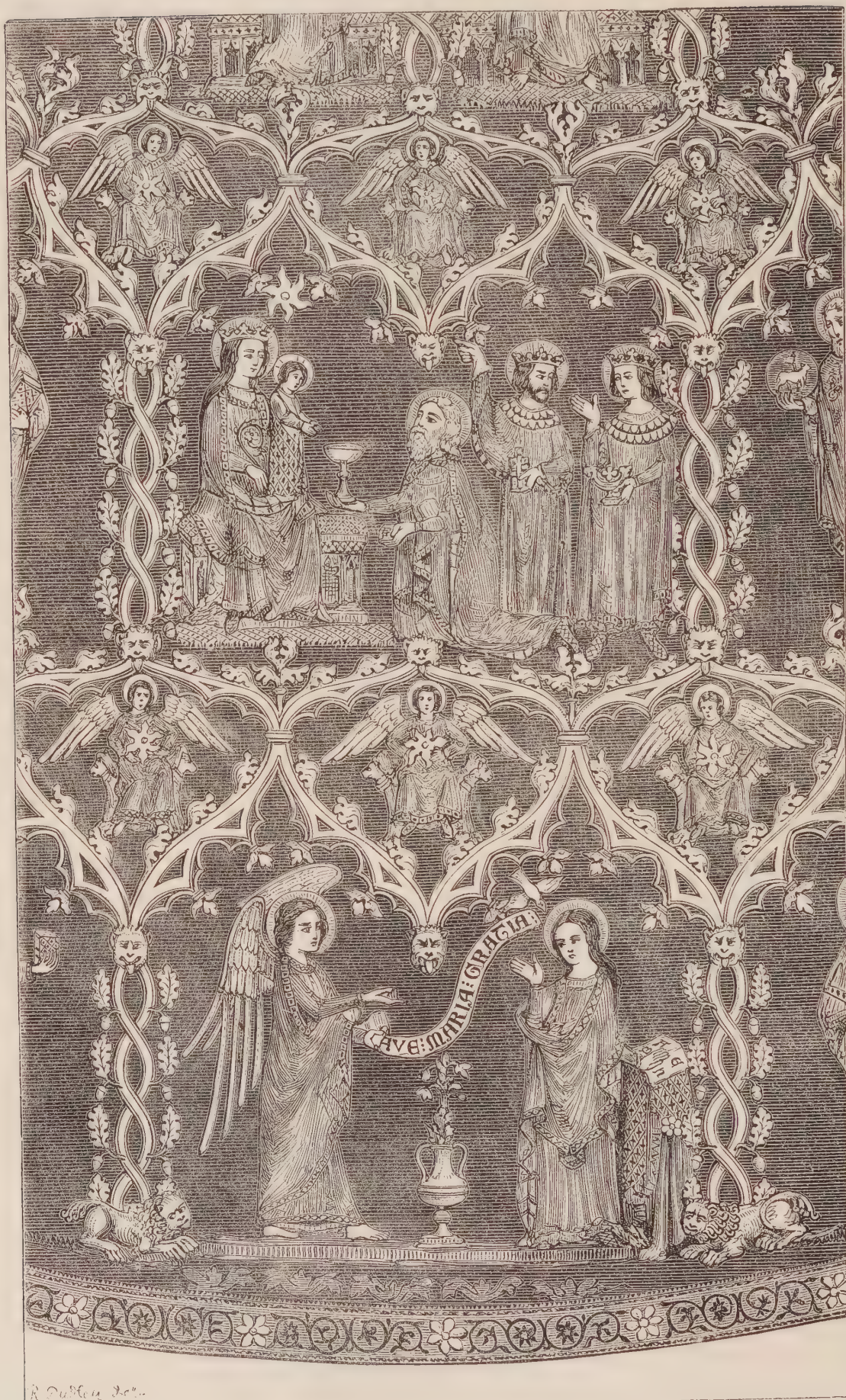


Representing Perseus rescuing Andromeda from the Monster
The property of Her Majesty.



With various scenes from the New Testament: inscribed in honour of the
Emperor Otho the Great.

Emperor Otho the Great.
Belonging to Mr. G. Attenborough.



EMBROIDERY FROM A COPE OF THE FOURTEENTH CENTURY.

Belonging to H. Bowden, Esq.

Of Majolica, Palissy, Sèvres and other kinds of pottery it is impossible to speak in any detail, nor can the various articles of furniture and decoration be dwelt upon. One personal relic, however, excited considerable attention: this was Cardinal Wolsey's hat, formerly in the collection at Strawberry hill and now the property of Mr. Charles Kean, the Tragedian.

The art of binding books was abundantly illustrated, both in original examples of the various styles, when the workman often exercised his craft for the love of God instead of lucre, and also in the modern imitations by Leighton, Tarrant and others. A large series also of medallions and coins, in bronze, silver and gilding, especially of the Italian and German States, from the fifteenth to the eighteenth centuries, were deposited in side cases; these, although in themselves unattractive, were suited to convey most important lessons whether in portraiture or events, or to illustrate the history of the medallists' art.

Exquisitely minute carvings in ivory attracted much attention and surprised many by the taste in design and execution of which the material seemed capable. The ancient Roman Consular Diptychs have been already particularized; but the austere style of the Romanesque and Byzantine school was amply shewn in the large square casket belonging to Colonel Meyrick, and several Plaques from the Fejérváry Collection, now the property of Mr. Joseph Mayer. The more perfect Italian style was best exhibited in the graceful Bonbonnière belonging to Mr. Beresford Hope, M.P., whilst the luxuriance and freedom of composition and workmanship in latter times were most fully attained by the Flemings, as seen in the numerous cups, sword-handles and couteaux de chasse, contributed by Her Majesty the Queen, Earl Cadogan, Mr. Philip Howard and Mr. Goff.*

Rich specimens of embroidery with the needle and productions of the loom were distributed through various parts of the building. One case was especially remarkable for the mass of silk and gold-embroidered church vestments on which historical scenes were figured in numerous compartments; among them the Santo Volto of Lucca was especially noticeable. Many borderings of the richest ornamentation involved a display of pearls and precious stones upon gold and silver tissue.†

* See the accompanying woodcut obligingly lent by Messrs. Day, from the Art Treasures of the United Kingdom.

† See the woodcut of an embroidered cope from the Art Treasures, obligingly lent for this volume by Messrs. Day.

Numerous hangings of arras and gobelins tapestry, some of extraordinary splendour, from Wolsey's Hall in Hampton Court, deserved a better position than it seems to have been possible to have afforded them. Many examples also of Raphael's cartoons, *in the very materials for which they were designed to be executed*, were to be seen in contributions from the Duke of Buccleuch's at Boughton Hall and from Ford Abbey, the residence of Mr. Miles. Tapestry also of a late date, but valuable towards the history of the art, had been profusely contributed from Windsor Castle. Some, however, of the really early and rare fabric from the Netherlands, illustrative of a period close upon the time of Charles the Bold, was to be seen among the wonderful varieties which distinguished the Soulages collection.

The Soulages collection, which formed a grand feature in itself, and was, as an accession of novelty and variety, an acquisition of great importance for Manchester, contained little that requires specification at the present time. Mr. Robinson's catalogue has most admirably set forth the peculiar interest and claim possessed by each separate article; but the general mass resolves itself into classes of carved furniture, hangings and ornaments, with nothing in their actual workmanship or other qualities requiring a marked distinction in these pages. Certain Majolica plates, however, should be excepted on account of the rare historical nature of the paintings on them; one contained a portrait of Pietro Perugino, and another, the Pope Leo X. in a grand procession, raised on the shoulders of his noblemen, and attended by Cardinals. A third, the famous plate from the Bernal collection, may also be named; it was ornamented with a picture of Raphael superintending the decorations of the Majolica vessels which bear his name.

In order to render the instruction pertaining to ornamental and decorative art as complete as possible, the Government very liberally permitted a selection to be made from the British Museum and the South Kensington Museum of specimens of art-manufacture and workmanship most conducive to that purpose.

To relieve the monotony of this general recapitulation, a few numerical particulars on minor subjects may not be unacceptable. The following are the dates when some of the first and most important pictures left London, under the care of Mr. Green, for Manchester. Lord Yarborough's pictures were removed from Arlington street, February 21st, 1857. The Prince

FROM THE ART TREASURES OF THE UNITED KINGDOM.

Edited by J. B. Waring, Architect



GROUP OF CHINESE PORCELAIN.

Consisting of an Enamelled Compotier, with open cover; an Hexagonal Vase, finely painted; a richly-decorated Plate; and a Teapot, with double kylin handle and gilt cover.

The property of Her Majesty the Queen, J. P. Fischer, Esq., the Rev. S. Titlow, and the Earl of Cadogan.

Consort's from Kensington Palace, March 18th. The Foundling Hospital and Mr. Stirling's, March 23rd, and the Diploma pictures from the Royal Academy, March 24th. They were for a while received at Manchester in a temporary place prepared expressly for them. The first instalment of art in the official buildings of the Exhibition, No. 100, Mosley street, was from Col. Meyrick, and consisted of a portrait of Nell Gwynne, the Holbein miniatures of Henry VIII and Anne of Cleves, and a portrait of Sir Samuel Meyrick, the founder of the Goodrich collection.

My first visit to mansions and galleries of art to inspect and select pictures according to the permissions granted by the respective owners, was to Lord de Tabley's and Mr. Smith Barry's, Marbury Hall, September 29th, 1856. My last visit was in April, 1857, to Liverpool, when I selected Mr. Baruchson's and Mr. Hodgson's pictures, and made a further demand on the Liverpool Royal Institution, which the directors very liberally sanctioned.

The contributions from Lord Spencer and Mr. Holford were, by subsequent arrangement, retarded to the last hour. The Duke of Manchester's also were accidentally detained, and in consequence of these delays many considerable difficulties and irregularities of arrangement in the galleries occurred. The following curious particulars are derived from some very authentic communications which have appeared in London since the closing of the Exhibition* and may serve in no small degree to prove the extent and working of the undertaking, as well as some of the immediate effects which it produced.

The galleries of ancient masters contained 1,079 pictures, exclusive of the 44 contributed by the Marquess of Hertford. The Portraits numbered 386, Modern pictures 689. Marble sculptures 160, Water colour drawings 969, Engravings 1475. The estimated worth of the 1812 pictures was nearly five millions of money.

The seven gentlemen forming the Executive Committee purchased the entire Soulages collection at the price of £13,500, for the express purpose of exhibiting it at Manchester. It has ever since remained on their hands. A police force, consisting of 67 men, under the superintendence of Inspector Pierce, kept constant watch in the building: forty-two men patrolled by day;

* Many very curious particulars on minor points connected with the exhibition were published in a series of Papers in the Literary Gazette, January, 1858.

eleven by night: 157,250 copies of the general catalogue were printed, and 13,250 of the catalogue of drawings and engravings. The revenue from the sale of the shilling catalogue was something near upon £7,400. On the first day 2,643 copies of the catalogue were sold. The revenue arising from the pence charged for sticks, umbrellas, parcels, &c., left at the entrance, averaged about £10 a day. The total sum derived from this source amounted to nearly £1500.

The number of season tickets sold was 12,357. The total number of visitors during the course of the Exhibition amounted to 1,336,715.*

A useful diagram drawn by James Gresham, shewing the fluctuations in the number of visitors during the period that the exhibition remained open, was published under the authority of Mr. Deane, the general commissioner. By this official return it appears that on the opening day, May 5th, when season ticket holders and invited guests alone were admitted, 8,000 persons were in the building. Between that period and the Queen's visit on the 30th June, the fullest attendance happened on Friday, the 5th of June, when 11,574 persons attended. During the day of Her Majesty's visit, when the public were admitted at one shilling each, immediately after she had left, the number of visitors amounted to 16,106. On Saturday, August 22nd, when the price of admission after two o'clock was reduced to sixpence, the number amounted to 20,610. The greatest number of visitors to the Exhibition in one day occurred on Tuesday, October 13th, that being the last occasion of the shilling admissions, when 29,160 persons passed the barriers. On Saturday, the 17th, when the charge for admission was half a crown, the number of visitors amounted to 17,988.

During the whole course of the Exhibition, Thursdays were reserved for the wealthier classes: payment at the doors was not less than half a crown: whilst an extra display of music, under Mr. Hallé's excellent direction, gratified the visitors. The greatest quantity of rain fell on Thursday, the 13th of August, when the number of visitors reached only 4,426. The smallest attendance in one day, 3,437, occurred on Monday, the 11th of May. On the first shilling day, Monday the 18th of May, the admissions numbered 4,299.

* The entire receipts of the exhibition appear to have been £93,504, viz.: money paid at doors £60,990, season tickets £23,014, catalogues, &c., £8000, and umbrella and stick department £1500.

An official return of the contributions and contributors to the Paris Exhibition in 1855, has also points of interest for the present occasion.

France herself contributed 1832 paintings by 1029 artists, Great Britain 374 paintings by 295 artists, Belgium 206 paintings by 134 artists, Prussia 154 paintings by 111 artists, Austria 107 paintings by 97 artists, Bavaria 65 paintings by 41 artists, Holland 98 paintings by 75 artists, Sardinia 36 paintings by 19 artists, Switzerland 97 paintings by 45 artists, Tuscany 1 painting by 1 artist, Papal States 11 paintings by 13 artists, Spain 69 paintings by 31 artists.

Of sculptures, France contributed 354, Great Britain 80, Austria 91, Prussia 38. Of engravings, France 442, Great Britain 329, Holland 30, Prussia 53, Saxony 12.

It may be generally admitted that, with the exception of Italy, Great Britain, taken altogether, contains a greater amount of excellent pictures than any other country. The existence of these fine works is known chiefly by records of sales as they pass into private hands. Until the year 1824, no acquisition of pictures was made by Government for the benefit of the public, and until that period there was no place whatever where the working classes could obtain access to first-rate pictures. The avidity with which our monied countrymen purchase works of art has long been known, and it is remarkable also that most of the important sales of pictures take place in England. Objects of art are sent over here for that express purpose, and with the exception of the collections of the King of Holland, Soult and Cardinal Fesch, all the best works seem to have passed under an English hammer: many of them, it is true, to return to continental ownership; many also into private hands in our own country. To obviate this fate of seclusion which had even then befallen so many chefs d'œuvre in England, the annual exhibition at the British Institution, Pall Mall, was devised. There, in three small rooms, a certain number of pictures is annually gathered for the season from private hands. But their yearly number is very limited, and it is, after all, only those persons actually resident in London, who can, after a long series of exhibitions, obtain any notion of the vast extent of treasures which our country does in fact possess. Foreigners who come over for a few months in the season, can have but a very poor idea of our pictorial riches. Persons also who might otherwise desire to study these works find it too long and too expensive a labour to go about from one mansion to another

asking for permission of access, and strangers cannot always foresee the nature of the various impediments that may lie in their way.

In 1832 Dr. Passavant of Frankfurt am Main made a somewhat extensive journey through England, and published an excellent account of his travels, dwelling especially upon the pictures and works of art which then came under his notice. The work was translated into English and had a decided success. The original preface to Dr. Passavant's volume contains much useful bibliographical information on works of art in England as they existed up to that period. Dr. G. Waagen visited our country in 1835, and in point of amplitude greatly improved on Dr. Passavant. His work was also translated into English; but it was not till the year 1851 that Dr. Waagen obtained that general reputation as an art critic which he deserved. The publication of his notes on art in England, in 1854, extended to three large volumes with an excellent index, established him at once as *the* authority upon such matters. Various offers of contribution, however, soon revealed that, notwithstanding the activity of Dr. Waagen during his repeated visits, he had by no means exhausted all the choicest works contained within these shores, and the publication of a fourth or supplemental volume by him, subsequent to the Manchester Exhibition, affords the best confirmation of this statement.

An exhibition, therefore, of *Pictures* on the principle of the London British Institution, but of course vastly extended, would be in itself most desirable; and this system Manchester chose to adopt, as she desired to attract all the world. Once determined on, the catalogues of the British Institution, Dr. Waagen's works, besides extra notes which he obligingly supplied, and the writings of Horace Walpole, Dr. Passavant, Mrs. Jameson, Smith's Picture Catalogues, Granger and the "English connoisseur," afforded a most valuable basis.*

That an exhibition of this nature was already much wanted in England, seemed quite evident. The entire result now shews, however, that

* In compiling the official catalogue, I took especial care to give every reference to the above works, and cited both page and volume, with my best accuracy, in the desire of affording means to those who might choose to make themselves more minutely acquainted with the history of the pictures, than was possible from the official shilling volume. My own strong recommendation to the Committee had been from the first to have fuller and more expensive catalogues of particular departments prepared, as well as slighter ones, to be sold at different scales. This course seems to have been very successfully adopted at the National Gallery and Hampton Court Palace.

Manchester was not at all the best locality for it, nor were the people who crowded there during the later days that the Exhibition remained open, prepared to receive any special benefit from it, beyond what *good copies* educationally arranged would have afforded them. A Sydenham Palace combining pleasure with education would have been more beneficial. The sight of the most precious pictures by old masters, which require a special study and education before hand, was of no real advantage to them; worn and torn canvases, blistered surfaces and strange impersonations could not be expected to engage either their attention or sympathy. But with modern, fresh, clear intelligible pictures, the case was far different. Of modern art, a still more extensive series, especially from foreign countries, would have rendered immediate benefit.* Had these ancient and mysterious pictures been ticketed with the names of the respective owners and the prices that had actually been paid for them, the gazers might have come away with some definite idea; but to the majority these old works were mere dingy masses of canvas and blotches of colour. That which appeals to present feelings was more important for them. A collection of the best procurable *copies* from the greatest works of the old masters abroad—and many very excellent large copies, both ancient and modern, could easily be obtained in this country—would have been quite as effective, and, to my thinking, much more locally beneficial.† The result, however, has proved that Manchester founded a guest-hall principally in her galleries of the old masters. Here it was that foreigners especially and the dilettanti of the south delighted to congregate, for the exhibition afforded information and benefit to each person in proportion to the knowledge and experience he brought with him.‡

Much, however, had been expected from the spontaneous visits of the working classes during the great annual holidays of the manufacturing district, Whit Monday and Tuesday; but the people whose duties keep them under mill-roofs day after day, naturally preferred the fresh air; and

* It was, however, amusing to hear how readily technical terms were made use of by persons of superior station, becoming really in many mouths a sort of cant.

† This feature I strongly recommended in a letter addressed to the Committee at the very outset of the undertaking.

‡ Of the older and more severe pictures, both German and Italian, it could not be expected that a general mass of working people would take much account; but I was powerfully struck by the tone and manner of those among the lower classes who *did* stop to look at them, as well as of those who merely cast a glance as they walked by. It was quite evident that the painter and they had nothing in common; but these spectators did not jeer or ridicule. they frequently *wondered* what was to be

the excursion trains conveyed them in dense numbers as far as possible among the blue hills and green trees of Lancashire and Yorkshire, where they enjoyed themselves to their hearts' content. The lower and uneducated classes did not go to the Art Treasures willingly. Many went because they were told they ought to go, and vast efforts were made towards the close to send whole schools, institutions and districts of children by means of subscriptions and various forms of treat-giving. In this way the galleries became densely crowded, so that many who both could and would have enjoyed the works of art thus temptingly arranged before them, were prevented. Had *educational* information been at the same time afforded to these helpless children and factory people, a more direct benefit might have resulted. Had the promoters of the Exhibition taken more time over it, and during three years instead of one, *disseminated preparatory instruction* among the lower classes, they would have afforded far more gratification.

The portrait gallery, although greatly exceeding the hopes and expectations which were entertained of its importance at the beginning, was totally lost upon the mass of visitors for want of labels to indicate the names at least of the persons represented.

When I had the honour of addressing the Members of the Historic Society during their visit to Manchester, I particularly stated my intention of affixing labels to the pictures, and having writings on the walls to mark the various schools and leading dates. This design, however, for which I had made extensive preparation, was set aside by a decision of the superior authorities.*

seen in such things, and sometimes an exaggerated attitude raised a laugh; still, for the most part, the cruder efforts of the old artists were regarded with respectful silence, and it was therefore the more to be regretted that the people who did come were not better prepared. But—it may be said—"the effects are yet to come, what these people "have now seen will sink deep in some minds at least." True, *in some*, but that only among the younger ones. Had a different class of objects been prepared for their notice, the effects would have been not only more decided, but more immediate.

* When we remember the advantages afforded by the numerous labels and inscriptions adopted in the great Hyde Park Exhibition, and the important part they filled even as a means of graceful decoration and cheerful colour—white letters upon red—the recent deficiency seems the more to be regretted. The general colour of the walls at Manchester was a dull green; but when accident, at the time of the heavy rains, compelled the temporary substitution of red cloth behind the pictures, an improvement in effect was universally admitted. In saloons A, B and C, the pictures were so close, that scarcely an inch of wall could be seen; but in the Hertford and modern galleries, especially saloon D, the dull green had a very poor effect.

Had certain days or parts of days in each week been reserved at a higher price, and devoted to lecturing and instruction, much good might have resulted. Indeed, as in Hyde Park, I fully expected a lecture-room would have been constructed.

A library of reference was also a great desideratum to working visitors at the Manchester Exhibition. Books of engravings and descriptions of the principal galleries of art are always necessary for those who really desire to study the subject and make comparisons. Manchester itself did not appear to contain many high-class or expensive works of this nature, nor could casual visitors think of taking ponderous books with them. At the same time, having such books at command in London, there would have been no chance of their purchasing them of the booksellers. A well-chosen library, arranged like the one till lately at Marlborough House, with a trifling sum charged for admission, as at a news-room, would have rendered very general service.*

It may after all be fortunate, that many of our finest private collections of pictures were not forwarded to Manchester. Their very absence led to the acceptance of offers that would otherwise have never been entertained; and by these circumstances a large class of excellent and much less known pictures were brought to light.

In my preliminary arrangements with the Executive Committee of the Manchester Exhibition, I undertook to collect for them various objects of ancient art and pictures by the old masters, and to arrange and catalogue them on the walls of the Exhibition. Here my engagement terminated. I strictly, from the first, limited my labours to the old masters, avoiding any connection with the galleries of modern art, and I particularly declined to have anything to do with returning the pictures after the close of the Exhibition. At the same time strong reasons were frequently held out to me to believe that I could be of much service to the Committee in an educational point of view, both in lecturing and affording information to visitors when the Exhibition had once opened; but it appeared, as the preparations advanced, that such thoughts were not entertained, and all information was to be entered in the catalogues alone. A handsome letter

* Finding the impossibility of procuring books necessary for reference whilst preparing the catalogue, I had numerous works in my own library forwarded from London. Many of these being both rare and serviceable, I would gladly have deposited, for a while, in such an accessible collection.

of thanks from the Executive Committee terminated my directorship of the Manchester Exhibition. I offered the Committee to devote a month of my own time, free of expense, if they would only employ persons to write and prepare the labels I might dictate to be affixed to the pictures and the walls. My offer was rejected, mainly, it appeared, on the ground that it might interfere with the sale of the catalogue. I even pointed out that several errors remained in the catalogue and would have corrected them, but received official intimation that any further changes were not desirable.

These comparatively trifling matters are mentioned here for the sole purpose of accounting for the nonfulfilment of measures which I had announced to the Society, and towards which, at the time, I was so much encouraged by the members. I am naturally anxious to record what I *would* have done, and to express a hope that in any future undertaking of similar magnitude and importance, the system of *labelling for the multitude* may be carried into effect. Both in the National Gallery and the British Museum that system works admirably. It has been proved in those establishments that a ready display of the leading names, both of artist and subject, serves only to excite a desire for further information, and that in consequence a greater number of catalogues have been sold.

Looking, however, to the walls of the Exhibition, there were many serious gaps and many shortcomings that could not have been anticipated: even after the preparations had considerably advanced, not a few disappointments as to pictures arose. None, however, were so severely felt or so much to be regretted, as that of withholding his contribution at the last moment, on the part of Mr. Munro of Novar. The superlative quality of his pictures is universally known and he clearly named and promised pictures which I had seen, measured, and reserved spaces for on the walls, till the last minute. Sir John Ramsden, also, liberally consented to lend pictures, but the packers unfortunately were not able to reach his country residence in time. The same misfortune caused the extensive picture contributions willingly granted by Mr. Danby Seymour, M.P., Sir Archibald Campbell and Mr. Edward Cheney, to be of no avail, and a very important bust, by Bernini, of great interest in the history of art and readily promised by Earl De Grey, was also lost. The extraordinary Van der Neer, belonging to Lord Shaftesbury, and several other works had also been promised. Mr. Blundell had assigned a very extensive supply of pictures from Ince Hall; but found

at the last moment that legal conditions prevented their being removed from the estate. By this means a very important picture by Van Dyck, and many early German and excellent Italian pictures, as well as some very fine Wilsons, were lost to the Exhibition.

A positive order having been issued by the Committee at the time of the opening of the Exhibition, forbidding the reception of any more works of art, *however excellent*, rendered all counteraction of these disadvantages impossible. Stringent rules also were enforced against making even the slightest notes or shorthand sketches in pencil from any of the pictures. The chief point of regret, however, as having impaired the tone of the gallery of ancient masters, was the rigid determination of the Committee to retain and hang whatever pictures had actually arrived at the building. In consequence of this, many works that had been sent on private recommendation or through other circumstances, when placed with genuine works, suffered and inflicted wrong by the contrast. Had I been permitted to act upon my own judgment in this respect, I would at once, and unhesitatingly, have returned at least *three hundred* pictures.

In consequence of the great number of works of art in proportion to the space prepared for them, many paintings of superlative merit were placed at an inconvenient distance from the eye. To counteract this, it would have been well, at certain intervals, to have interchanged their positions vertically, and to have brought some of them for a while nearer on a level with the spectator. By this means the sequence of the numbers for reference in tracking the pictures by the catalogue would not have been seriously impaired. These considerations seem to me to be worth noting, inasmuch as they may be serviceable in future towards the management of any similar collection.

It may be supposed after the foregoing remarks, that I would have discarded all pictures of an inferior quality; that, however, I certainly could not have held desirable. One among the many objects of an assemblage like the one in which I was permitted to take so active a part, I hold to be the collecting of all works that persons would *most desire to see*, and for that reason *celebrities*—whether justly or unjustly so—would be thoroughly admissible. One result of the Manchester Exhibition has already been to convince connoisseurs that many celebrated works of art until then kept secluded, or in peculiar positions difficult of access, were not deserving of the

pains that seekers might bestow upon them. Of this class it will suffice here to mention the Oakover pictures, and one, a "Silentium after Michael Angelo," belonging to Mrs. Dawson. At the same time, it is but fair to add that the near view and broad light which dispelled so many other charms, had also the good effect of establishing the merit of several pictures which had so recently and unexpectedly been brought to light. There is no doubt that if more time had been allowed in preparation, many more discoveries of this kind would have taken place.

Another distinctive feature of the Manchester Exhibition was also to be found among the contributions of statuary.

The number of examples of this art, compared with those in the Hyde Park Exhibition, was far more limited, and for the following reason.

The Committee resolved to admit no sculpture whatever in plaster; all were to be either marble or bronze. This limitation, although it may have gratified the denizens of Manchester by the sight of a clear translucent material, led in many cases to the substitution of the pretty and ornamental for works of a higher order. It was perhaps a correct assumption that no one would send a marble statue to so great a distance where plaster casts were also admissible, and that by laying down so exclusive a rule a fair contribution of Parian and Carrara marbles might be forthcoming. Such, however, proved to be the case, and it was really surprising that so great a mass of marble sculpture could be obtained. Manchester, it seems, *would* have the *real* material, and seemed to believe that the pure, beautiful and delicate white plaster was an unworthy means for an artist to express his thoughts in precise form. But it is clear that by means of this restriction, many of the grandest, most sublime and most effective productions were repelled.

By this arrangement, sculpture,—so intimately allied with painting and so rich and varied in character,—sank low in the Art-Treasures' Exhibition.

In Hyde Park, however, the abundant display of plaster statuary did not retard the contribution of marble works; but that was in the metropolis, and it must be remembered that every thing there was comparatively on the spot. At Manchester, the Duke of Newcastle and Lord Ward were the most extensive and liberal contributors of sculpture. The late Mr. Smith Barry also rendered most valuable assistance by the numerous antiquities which have been already named. Mr. Cornwall Legh, M.P.,

exhibited a charming and massive group of Ino and Bacchus, of which also a duplicate was sent by the Marquess of Abercorn.

Basreliefs and busts in marble were comparatively easy of transport, but of the former only a very limited number could be exhibited, since the wall-space was almost totally occupied by the paintings. The heroic statue of Napoleon I, by an Italian artist, and a graceful figure of Euphrosyne, by Sir Richard Westmacott, R.A., were among the most important of the contributions from Clumber House. The Greek Slave, by Hiram Power, and the recumbent Magdalen, by Canova, were valuable additions from Lord Ward's gallery. The Greek Hunter, by Gibson, a group of Adam and Eve, by Schuier and a fine statue of Venus, by McDowell, in imitation of the antique, were especially deserving admiration. Nor should McDowell's colossal group of Virginius and his Daughter, which so long occupied the most central position, at the intersection of the transepts, pass unmentioned.

There was, however, no veiled vestal, as in the 1851 Exhibition, to captivate the public. The best statues in the late exhibition, besides those already mentioned, were Bailey's "Eve at the Fountain," Ganymede, by Flaxman, Paris, from the School of Canova, Venus and Cupid, by R. Davis, the wounded Amazon, by Gibson, a basrelief of Angels, by Thorwaldsen. Busts of Wellington, John Hunter, Dr. Simpson, Tennyson, Dr. Frewin by Roubilliac, and Cardinal Grimani by Alessandro Vittoria were seen to considerable advantage.

The group representing a Boy and a Dolphin, attributed to Raphael, although by no means satisfactorily proved to belong even to his school, was a highly valuable addition to the collection, as it afforded judges and lovers of art the fair means of investigating for themselves a work which, like certain pictures already alluded to, has long enjoyed a high reputation and been much talked about.

Having thus far spoken of the preparations and arrangements as conducted by the committee and their officials, it may not be uninteresting to glance at the various literary productions which the undertaking called forth.*

* It was at first expected that the Committee themselves would have published some elaborate and authentic work on the Exhibition, as was the case after the Great Exhibition in Hyde Park; but towards the end of September it was clearly made known that nothing was intended to be done; and Mr. Murray of Albemarle-street, after conferring with the Committee, withdrew also from any undertaking of that nature.

Two extensive works, recognised by the Executive Committee and dedicated to the Prince Consort, have been published and claim the precedence.

The folio volume published by Messrs. Day, called "The Art Treasures of the United Kingdom," had the advantage of the arrangement and direction of Mr. J. B. Waring. It contains an immense variety of plates, lithographed in colours from photographic transcripts of extraordinary clearness, with letter-press descriptions by known writers, and may be truly regarded as the best record of that part of the exhibition. Messrs. Colnaghi published a series of photographs from the pictures both ancient and modern, but being only photographs of painted canvases and frequently worn panels, liable also in the process to great inequalities from the nature of the colours and surfaces, they produce very different effects from the originals and could not be thoroughly satisfactory. From the misfortune of blue turning white and yellow black, numerous difficulties arise, nor can manipulation be very efficiently introduced by way of counteraction. They can only be regarded as vague and partial transcripts, although it must be owned that wherever the original *does* clearly reveal itself the rendering is fact indeed.

Next to these works in point of authenticity were a series of essays which appeared as articles in the *Manchester Guardian* upon the various departments of the Exhibition, and which were afterwards reprinted and sold in separate volumes. They were written by Mr. Tom Taylor, with the exception of the Museum of General Art by Mr. Waring; the Armour by Mr. J. R. Planché, and the Gallery of Ancient Masters by myself.

Two very influential articles appeared in the July numbers of the *Quarterly* and *National Reviews*. Both writers evince great knowledge of the subject they dilate upon; but it is evident, in each case, that the leaning was principally towards the gallery of the ancient masters, whereas, to treat the Exhibition fairly as a whole, both the gallery of prints and the general museum in the central nave required a particular attention. The general disposition of the Manchester operatives towards the Exhibition was truthfully and graphically set forth by the writer in the *National Review*.

Finding then, that there seemed no chance of any authentic record being preserved, I resolved to attempt, at least, to devote my best abilities towards supplying one. Numerous subscribers and the encouraging assurances of confidence in my labours have determined me to labour to establish a record as ample and as accurate as possible. Official duties and the collecting of materials for my great work have, to a certain extent interfered with my readiness in committing these desultory notes to press; and, indeed, I feel some apology due to the members for my having caused so serious a delay.

The observations also in the *Quarterly* relating to the building itself are so pertinent that a transcript from page 202 may be generally acceptable.

“ No one can enter the Exhibition at Old Trafford without being impressed with the admirable adaptation of the building to its immediate purpose—the display of the works it contains. There is no attempt at fine architecture, no imitation of a Greek temple or mediæval town hall. The materials most fitted for the construction of a light and spacious edifice—brick, glass, and iron—have been employed, and only one thing has been kept in view—the object for which the building was intended ; its construction not having been confided to the exhibitor of the best design in Tudor, Gothic or Italian Renaissance. The result has been the erection of a very noble picture gallery, in which pictures may be placed and seen to the greatest possible advantage. There is ample space for hanging, room to judge of the effect of a work of art from a distance when necessary, subdued equal light and admirable ventilation. When will it be understood that the best architecture consists in that which most completely fulfils its object, which shews the greatest command over the materials that are obtainable and which represents the wants and feelings of the day ? It is because they unite these qualities that two of the most successful modern buildings with which we are acquainted are the reading-room at the British Museum, and the Manchester Exhibition.” The following also, from page 166, is so full of truth and observations in which I concur, that a second quotation may have the advantage of better language to express my own thought than I could otherwise have offered to my audience.

“ An Exhibition comprising pictures gathered from so many different sources may be compared with the magnificent collection brought together by Napoleon after his Italian conquests, rather, however, as offering a contrast worthy of the spirit of the age—the contrast between the triumphs of war and the triumphs of peaceful industry—than with the view of making any comparison between the merits of the pictures in each. The Commissioners employed by the Emperor drew without stint from the richest mine of art that has ever been opened to the christian world ; churches, convents, palaces, galleries—every edifice which christian piety or princely munificence had adorned with the greatest works of the greatest men—were ransacked to render complete a collection worthy of the world’s capital. It was a tax levied upon the genius of Italy, and the tax-gatherer spared none. We may then easily credit the description given by those who were privileged to wander through the vast galleries which contained these treasures of art, and we may believe, as well as in charity hope, that the like will never be seen again.

“ There were few pictures thus brought together which were not ranked amongst the best productions of the masters who painted them. The somewhat limited nature of the collection, as regards the class of works exhibited, was to be attributed to the taste and prejudices of the day.

“ At that time the feeling for the pure, simple and devotional character of
 “ the early Italian masters had not yet been received. The eclectic
 “ schools, as it is the fashion to call them, were in vogue ; consequently,
 “ whilst only a few of the most celebrated pictures by the great masters,
 “ who lived previous to Raphael and Leonardo, were collected, the Louvre
 “ was crowded with the works of the Caracci’s and of the later Bolognese
 “ schools, Guido, Guercino, Domenichino, and their pupils and imitators.
 “ To represent the earlier Italian schools of the fourteenth and fifteenth
 “ centuries, there was little except one or two fine pictures by Pietro Peru-
 “ gino. Nor had the instructive system of arrangement in chronological
 “ series by schools, illustrating the gradual development of each, been yet
 “ adopted. Had a well-digested scheme, founded upon this obvious and
 “ now fully recognised principle been carried out, the gallery of the Louvre
 “ would have been the most complete and important illustration of art-
 “ history and of the progressive unfolding of human thought that the
 “ world ever saw.

“ In the quality of the works collected, the Exhibition at Manchester can
 “ in no way be compared with the Louvre under the empire. Of the
 “ Italian schools of painting we have scarcely one picture which can furnish
 “ any adequate idea of the power and genius of the illustrious men who
 “ are first in the hierarchy of art, and whose master-pieces can best be
 “ studied in the churches and great collections of Italy. Nor is the Exhi-
 “ bition equal for the class of pictures it contains to the principal galleries
 “ of Europe. And yet it would be difficult to form a more instructive and
 “ interesting collection—one which, at a moment like the present, when art
 “ is beginning to be better understood and more widely studied, could afford
 “ more useful hints and teach more to the English public.”

Both the *Quarterly* and *National Reviews* observe the want of minute completeness in the hanging of the pictures by the old masters, and they, at the same time, both justly and correctly presume that difficulties and hindrances beset the undertaking. They did not, however, seem to have been aware of my studious desire to exhibit *celebrities* in the strongest light, or of the rule, —although stated in the catalogue—that was laid down from the first, and formed part of an agreement with many of the contributors, that the pictures should be called by whatever names owners chose to send with them. In some instances, as far as time allowed, I was able to append more correct designations than were at first sent ; but Lord Northwick, like many others, remained steadfast in his adherence to the names already assigned in his gallery catalogue.

To resume my mention of the books printed to illustrate the Manchester Exhibition, there were two cheap publications called the *Art Treasures’ Examiner* and *Cassell’s Art Treasures*. These, although not exclusively relating to the collection at Old Trafford, may have rendered good service

by disseminating some general ideas of art, and by affording some rough wood-cut illustrations of the principal objects of the Exhibition that many would cherish as souvenirs or indications towards better things. The *Handbook to the Exhibition* by Thomas Morris, was a pamphlet hastily made up from information gained during the preparations. Foremost, however, among authentic guides should be placed Dr. Waagen's well-timed, but too scanty, work called "*What to observe. A walk through 'the Art Treasures' Exhibition under the guidance of Dr. Waagen.*" In this the worthy Doctor did little more than select particular pictures for observation, and give, as had already been done in the shilling official catalogue, a reference to the page and volume of his "*Treasures of Art in Great Britain,*" containing the description of each picture. As Dr. Waagen did not enter upon the modern galleries, an excellently executed and ample "*Companion to a Walk*" was published by an amateur. It really contained a great amount both of historical and critical information. Like Dr. Waagen's the price was one shilling.

Jerrold's Guide, price sixpence, contained a large amount of well and closely printed type, with all points of information clearly arranged and strengthened by various quotations from the *Times*, *Athenæum* and *Saturday Review*.

The earliest of the penny guides was the "*Peep at the Pictures,*" capitally executed for its purpose, because addressed to persons utterly inexperienced in art; and it consequently had an enormous sale. "*What to see and where to see it,*" also a penny guide for the operatives, went through various editions, and deserves to stand high among works prompted by benevolent feelings.

There was besides a clever, but strange, account of a visit to the Art Treasures' Exhibition in a magazine called "*The Church of the People,*" No. 3 vol 3, July, 1857, and the Exhibition was likewise the theme both of Sunday tracts and sermons, among the latter of which may be mentioned "*A word in season,*" by the Rev. Canon Stowell, preparatory to the opening on the 5th May; and "*The Mother and the Queen,*" by John R. Beard, D.D., after Her Majesty's visit, June 30th, 1857. Several strange works also were published in the Lancashire dialect apropos of the Manchester Exhibition. Among them "*Sam Sondnokkur's Ryde fra Ratchda to Manchister.*" "*Bobby Shuttle and his Woife Sayroh's visit to Manchester un'th Greight*

“Hert Treasures Palace, owt Traffort;” and “a peep at t’ Manchester Art Treasures Exhebishan, be Tom Treddlehoyle.” In another strain also, but not to be passed over in this list, was a clever series of sketches and poems taken from the pre-Raphaelite works in the modern gallery, called “*Poems inspired by certain pictures*,” &c., which, although only caricature outlines accompanied by slight letterpress, afforded strong proofs of talent and a quick perception of what really constituted leading characteristics among works of art.

Various works from the foreign press, commemorating a visit to Manchester, contained both novelty and information. The first is by M. Alfred Darcel of the gallery of the Louvre. The title of his pamphlet was “*Excursion Artistique en Angleterre*.” It was written very pleasantly, and with much spirit and learning. A second essay by the same author, “*Les Arts Industriels*,” related to the contents of the General Museum of Art. There were also various articles in the German papers from the pen, I believe, of Dr. Waagen. M. Charles Blanc, in his little volume. “*Les Trésors de l’art à Manchester*,” gives a general account of the Exhibition and a selection of the most noteworthy objects, with extracts from the catalogue classified under their respective heads. In describing the formation of the Guarantee Fund (page 9), he was much impressed by the fact, that a friend of his offered a contribution of £200 (5,000 francs), which was declined by the Committee on the ground of their receiving no subscription for a lower sum than £500 (12,500 francs). He adds “J’ai vu la lettre; telle est ici l’abondance de l’or; tel est l’orgueil du riche.”

A print connoisseur of Vienna was also at the Exhibition making very careful notes with a view to publication, but I have not as yet seen any result. M. M. W. Burger contributed a series of articles to *le Siècle*, which have been collected in a volume under the name “*Trésors d’art à Manchester*.” M. Paul Mantz also published an article on the Exhibition in the *Revue Française* for June 20, 1857. Dr. Springer was deputed by the Duke of Saxe Cobourg to visit and report upon the Exhibition.

We have yet further to turn our attention to the history of the Exhibition and its influences, before even this summary notice can be closed. Great and most philanthropic exertions were made in all directions. The liberality of the wealthy employers contributed much to secure the attendance of vast numbers in one day. Thus, for instance, on Saturday, Sept. 19th,

2,540 of the operatives from the famous Saltaire Works, near Bradford, visited the building at the sole expense of Mr. Titus Salt, including their refreshment. On the same day 400 scholars from the Prestwich Church Schools were present, at the expense of the Chairman of the Committee and the Countess of Wilton. On Saturday, the 22nd of August, upwards of 800 of the mechanics in the employment of Messrs. Fairbairn and Sons, the eminent engineers, visited the building. Here again, Mr. Thomas Fairbairn, the Chairman of the Executive Committee, defrayed the expense.

On the same day, about 800 of the work-people of Mr. Edmund Potter, from Dinting, were treated by their employer to a visit.

The children of the Manchester Deaf and Dumb School visited the Exhibition on the 12th of June.

Four hundred children of the Worsley School were treated to the Exhibition by the Earl of Ellesmere, on the 21st of September.

Notwithstanding all these exertions, the operatives themselves manifested but little sympathy. Among these vast bodies, thus introduced, the workmen from Mr. Edmund Potter's at Dinting, showed most interest and gratification. This may perhaps be accounted for in two ways: firstly, Mr. Potter is known to have always devoted especial care to afford his men every opportunity of obtaining useful knowledge and recreation; and secondly, the very nature of their occupation, calico-printing, has an essentially artistic element connected with it.

A letter, addressed to the *Times* of Sept. 16th, dated Manchester, gives a faithful picture of the proceedings of many a fustian-jacketed visitor. The following is an extract from it.

"We have not a population, within a reasonable distance, who can be expected to appreciate it, (the Exhibition) and although one of our newspaper editors started the theory that the study of the ancient masters would interest and elevate the masses, I think that few will be found to agree with him; it is like feeding infants with 'strong meats.' To shew what the masses can appreciate, I may state that a firm, in Sheffield I think, sent their work-people to the Exhibition, and also made provision for them having refreshments there; yet, notwithstanding this, in a short time after reaching the building, few were to be found in it, the bulk of them having gone to Bellevue-gardens—something like your Cremorne. Nor can this be wondered at, the people were true to their instincts."

I am not aware of any association or subscriptions like the Alpha Fund, that was started at Manchester in the course of September, having been

adopted either in London, during the Hyde Park Exhibition, or at the Sydenham Crystal Palace. The object of this benevolent scheme at Manchester was to afford all helpless Sunday school children and others, who had not sufficient means to visit the Exhibition.

Sir James Watts, the Mayor, and Mr. Thomas Fairbairn, the Chairman of the Executive Committee, each subscribed £100 to the Alpha Fund, and by the successful working of this subscription, a considerable addition to the number of visitors was secured. It is among these young and not yet too firmly-moulded thoughts and perceptions that the best results are to be hoped for. Young children, although their fingers may have been already doomed to manual labour, have their minds still elastic, and, although worldly cares *do* sit earlier on the brow in Manchester than elsewhere, fresh thoughts have more chance of making an impression on them than on a world-bound family man. Thus, it may chance that some of these infantine mill-hands, having seen the beauty and capacities of art among the modern pictures—the ancient I have already withdrawn from the pale of consideration—may in after times proclaim, by a natural talent rightly evoked, that the Manchester Exhibition had served as a means towards the *creation* of art.

After the closing of the Exhibition on the 17th of October, 1857, when Mr. Fairbairn addressed a short and appropriate speech to the company about to withdraw, the public knew little more about the proceedings of the Executive Committee.

All arrangements for the separating, removing and returning the multitudinous portions of the Exhibition, had been so efficiently and perfectly pre-organized by Mr. Deane, that from Monday, the 19th, when the work of dispersion commenced, everything proceeded rapidly and smoothly, and by the 23rd of October nearly all the water-colour drawings and engravings had been removed. On the 31st of October, the *Manchester Guardian* reported that of pictures by the ancient masters only about 150 remained in their places; nearly all the historical portraits had disappeared; not more than a score of modern paintings remained in the northern saloons. “Everywhere there are long lines of packing-cases, and groups of men filling or removing them. The great bulk of the contributions of Her Majesty the Queen has been despatched to Windsor or to the metropolis; and at eleven o’clock this forenoon, a special engine starts with most carefully loaded trucks, bearing all that remains. Her Majesty’s contributions fill

“no less than 139 cases, some of them of the largest size; and it must be remembered that this statement has no reference whatever to the many pictures and other works contributed by the Prince Consort, which are very nearly ready to be returned. Among other things sent from the Palace since our last notice, may be mentioned the Earl of Yarborough’s (59 pictures in 16 very large cases), those of Earl Spencer, the Earl of Feversham, the Earl of Derby, all that belongs to the East India Company, the contributions of Mr. Howard Galton, &c.”

On November 7th, the same journal states,—“We found yesterday, that not many more than 20 oil paintings of any kind remained on the walls of the Palace, several of the saloons on each side being completely bared. The sculpture not packed, or not in the course of packing, does not exceed 25 works; much of the armour has disappeared, huge packages encumbering the floor; all the cases have been more or less stripped; and of the Soulagés Collection only a few articles are now visible.”

On the 11th November, the last detachment of pictures left the building, and included Viscount Galway’s large picture of Charles 1st and his Queen, attended by the dwarf, Sir Jeffrey Hudson, starting for the chase. This work of art, measuring 9 feet in height, and 15 feet 6 in width, was of necessity removed by a waggon and horses, as neither railway nor canal could possibly convey it.

On October the 28th, the Executive Committee rendered to the subscribers of the Guarantee Fund an account of their administration. The general meeting for this purpose was held in the Mayor’s parlour at the Town-hall, Manchester. In the report read by the Secretary, Colonel Hamilton, it was stated that 1,053,538 visitors paid for admission; 282,377 times the season ticket holders availed themselves of their privilege, making a total number of 1,335,915 visitors.* “Up to the public close of the Exhibition on the 17th instant, the cash receipts from all sources standing to the credit of the Committee may be stated at £98,500. The total expenditure up to the same period, and the further liabilities which are definitely known to the Committee, such as cost of police to the end of November; insurance of all kinds, rents, &c., amount to £99,500. The still further outlay to be incurred, includes all the expenses of returning the contributions to their respective owners. It will be seen at once that it would be impossible, at the present moment, to give anything more than

* From reports in the Times and Manchester Guardian, October 29th and 30th. In illustration of the great traffic created by the establishment of the Art Treasures’ Exhibition, it may be interesting to mention, that in the Illustrated News of August 28, 1858, it is stated that in the months of May and June, the Art Treasures’ Exhibition at Manchester brought a clear profit to the Company of the North Western Railway of £20,000. What, therefore, must have been the profit on the whole period of the exhibition, if £10,000 for each of the first two months?

“this approximate statement of our financial position. To meet this excess of expenditure over the cash receipts, we have the exhibition building and its fittings.”*

The Chairman, Mr. T. Fairbairn, then proposed the following resolution:—

“That this meeting—as well on behalf of the immediate promoters and supporters of the Exhibition of Art-Treasures of the United Kingdom, as the City of Manchester, where that Exhibition was held, and the vast thousands of all ranks and countries who have enjoyed its beauties, and benefited by its lessons—records its sense of profound gratitude for the existence of that social harmony in this country which alone rendered such a gathering possible. It acknowledges for the country at large, the munificent liberality and disinterestedness of the contributors, whether in the highest or the humblest ranks of life; believing that one and all were moved in their decisions by a sincere sympathy for a great and refining work, and by an honest desire to improve and gratify their fellow-creatures.”

After due acknowledgment to the Executive Committee for their exertions and the admirable manner in which the designs of the promoters of the Exhibition were carried out, Mr. Edward Loyd read a resolution which had been placed in his hands; it was thus worded:—“That a sum not exceeding £1,000 be placed at the disposal of the Executive Committee, to be used by them at their discretion, should they deem it desirable to recognize the services of the officers of the Committee.”

This liberal proposal to devote a portion of the Guarantee Fund in grateful recognition of services, being seconded by Mr. Edmund Buckley, was at once passed; and the Executive Committee judiciously apportioned the sum amongst the principal officers then retained on the establishment, among whom there is ample reason to believe that not a few had found the duties increased upon them beyond what could have been expected at the commencement.

I take this opportunity to record the zeal and untiring energy of two gentlemen, Mr. W. Street and Mr. C. P. Hillier, who were engaged in my department for the special purpose of aiding me in compiling both catalogues and references, as well as guiding the workmen in hanging the pictures. The extreme shortness of time rendered these qualifications the more valuable.

On November 2nd, the Duke of Devonshire, who had frequently visited the Exhibition towards the later period of its existence, and repeatedly

* On the 5th of May, 1858, exactly twelve months after the magnificent opening ceremonial, the building was sold by an auctioneer as so much old iron and second-hand materials. The produce was far below the previous expectations of the committee.

expressed his regret at not having been a contributor to the Galleries of Art, entertained the Executive Committee at Chatsworth, and gave on this occasion a banquet and ball expressly in commemoration of the Manchester Exhibition of Art Treasures.

On the 31st December, at a *déjeûner* given by the Manchester Town Council in the Mayor's parlour, the Executive Committee appeared publicly as a body for the last time. The purport of the meeting will be best seen by the following extract from the resolution which the Mayor read. "That this Council is deeply impressed with the great advantages conferred upon this city and the community at large, by the recent Exhibition of Art-Treasures of the United Kingdom, an exhibition of works of art unrivalled in magnitude and value, the examination and study of which were eminently calculated to improve the knowledge, and elevate the taste of all visitors, and, by bringing together different classes not accustomed to associate, to promote goodwill and kindly feeling among all sections of the people."

The great interest which the undertaking at Manchester seems to have awakened throughout the United Kingdom, and the energetic attempts made by all lovers of art who could compass the means to visit that locality, suffice to prove the want of some collection of this kind on a larger and more extended scale, in a more accessible place for those classes who can best enjoy and benefit by it, whilst the enterprise which has been so honourably terminated at Manchester, might render great service towards it, both in the way of example and experience.

Energetic movements, it appears, are already begun towards a great national exhibition in London, to be held in 1861. The Society of Arts have expressed their opinions strongly in favor of decennial exhibitions; but the date now proposed will by no means leave the operators time to spare.

In 1851, England displayed her relation with, and influence over, the produce of the rest of the world.* In 1861 she might advantageously

* I perceive that I omitted, by an unpardonable oversight, to mention two important Exhibitions at the commencement of this paper. Birmingham, previous even to the London one, held an extensive Exhibition of Manufactures and Art, in 1849. The temporary building to contain it was, as the Hyde-park one was at first intended to be, entirely of wood. It measured about 128 feet in length, and 90 in breadth, forming a kind of Basilica, with nave, clerestory and aisles. Glass and metal-work were then confined entirely as materials to the objects collected for admiration.

On the 9th of June, 1852, the Irish Industrial Exhibition was opened at Cork, with great éclat; it led the way for Mr. Dargan's spirited undertaking at Dublin the following year.

shew not only her own produce, but her actual *possessions* in the fine arts, confining her exhibition, as Manchester was the first to devise, exclusively to the property of subjects of the United Kingdom. If indeed, as now seems more than probable, this undertaking be fairly carried into effect in the Metropolis, we may hope to see a worthy successor to the great Hyde Park Exhibition, by which the greatest boon ever conferred in our time upon pictorial art will be secured.

In point of picture-gathering, Mancestrian enterprize has certainly gained the start of the Metropolis, and, from what has already been done, London may derive much valuable experience. The non-appearance of many of England's most celebrated pictures at a provincial exhibition might be regretted; but their absence from a Metropolitan collection would be fatal.

The display of engravings and the best obtainable copies of great foreign works, whether old or new, on the original scale, would be highly instructive and beneficial, and the clearness and accuracy of the order of their arrangement, in favourable space, would be a chief means to popularize them. For all these requirements, the time between this and 1861 would appear comparatively inadequate. But, by means of accurate reductions of the pictures, made to scale and arranged in models of the galleries of corresponding dimensions, (provided, of course, that perfect accuracy be secured), much trouble, uncertainty and delay might be avoided.

Having spoken thus freely upon points which appear to me to have been most characteristic, as well as others which remained deficient in the working of this great enterprize, I feel it a duty to render full acknowledgment of the universal kindness and urbanity of the gentlemen who constituted the Committee of Management; indeed the anxiety and incessant attention which they extended even to the most trifling minutiae, can only be known to those who laboured with them. Mr. T. Fairbairn and Mr. T. Ashton were truly indefatigable; nor can there be any doubt that the successful working of the whole enterprize was mainly owing to their clearsightedness, energy and devotion.

The policy of attracting visitors to a particular spot, and thereby promoting trade and commerce, has been successfully adopted by King Louis of Bavaria in his art capital, Munich. Rome, indeed, has long been

principally supported by visitors to her decorated churches, ruins, palaces and galleries; and never, perhaps, was concourse so extraordinary as that which flocked to the papal city under the religious excitement raised by the jubilee of Boniface VIII in 1300. It succeeded so well, that the inducement was repeated several times afterwards, sometimes even at short intervals, but always with a certain amount of success, yet never, as might naturally be supposed, with the same intensity which distinguished the first.

Our great Exhibition in Hyde Park of 1851, was not inaptly termed "The World's Fair." In point of influx it seems to have been to London what the gathering of 1300 was to Rome. That parallel may now very fairly be extended to the Exhibition at Manchester in 1857. The employment and admiration of art for such purposes is surely the best policy, and must be hailed as a proof that a nation has attained the highest civilization.

With regard to Manchester, we must indeed echo the hopes expressed by the enlightened chairman on the occasion of his receiving the thanks of his fellow-citizens, namely, that another and an important benefit would be found among themselves, that henceforward they would all feel that it was not incompatible with the successful pursuit of trade, or the exciting struggles of commerce, to enjoy or have an appreciation of the beautiful and the chaste. He believed that the more those feelings were cultivated the happier would be their homes and the more enjoyable their lives.

Desirable, indeed, as a London Exhibition does appear, and whether the Art-Treasures' Exhibition of Manchester may hereafter be looked upon as the pioneer, or the experimentum crucis of such a gathering, all remains vague. But the Manchester Exhibition is *achieved*: it is a certainty, and as such is now to be thought of and dwelt upon. In all its details, the more attentively it is considered, the more convinced must every one be, that those who started it realized, to the fullest degree, all they had actually undertaken to effect, and that nothing but indomitable will, steadiness of aim and the concentration of all those business-like qualities which so essentially distinguish the Englishman, could have surmounted so many serious obstacles or have established the exhibition on so firm a basis.

PROCEEDINGS.

TENTH SESSION, 1857-58.

ANNUAL GENERAL MEETING.

St. George's Hall, 19th October, 1857.

J. T. DANSON, F.S.S., V.P., in the Chair.

The minutes of the last meeting were regarded as read, and were confirmed.

The Honorary Secretary read the following

REPORT:

In resigning their offices at the close of the Ninth Session, the retiring Council have pleasure in reporting to the members, the uninterrupted progress and healthy condition of the Society. The routine duties are performed with greater ease and facility; the intellectual material is abundant; the numerical strength of the Society has increased; and the mutual intercourse of the members has been promoted.

At the close of the eighth Session, the number of members of all kinds, as shewn by the printed list, was 458; it is now 491. These consist of 47 life-members, 243 resident annual, 167 non-resident annual, 3 lady-associates, 3 ex-officio, and 28 honorary. Some of these retire voluntarily to-day; and a few it may be necessary to bring before the Society, for the operation of Law XII.

The Annual Volume has been later than usual in its issue; but it is now sent out to the members. It should be understood distinctly that it is forwarded to every one whose subscription for the ninth Session is paid, whether he is retiring or not, and that it is withheld from those members only whose payments are in arrear more than one Session.

During the Session, the Catalogue of the Collection was printed off, and the whole is now in perfect order. On every evening of meeting, the Society's Room will be open from Five till within a few minutes of Seven, and members who cannot attend may obtain books by a written application to the Assistant Secretary.

The Treasurer's Balance Sheet shews that the sum of £417 2s. 6d. has been received, and £442 7s. 7d. paid; but some considerable items were of a special and unusual kind. The working expenses do not exceed the estimated average, and there is a sum of £14 5s. 11d. in hand.

The practice has been continued, this Session, of throwing open to a larger number of Visitors, including Ladies, one of the Ordinary Meetings for miscellaneous purposes, and the results were again highly satisfactory.

In the month of November the members and their friends had an opportunity of inspecting together the various collections of Mr. Mayer, by the special invitation of that gentleman, and those who were present will long remember the agreeable and instructive evening which they spent.

In accordance with the directions of the Society, the Council made arrangements for receiving the Archæological Institute of Great Britain and Ireland at Liverpool, during the week of its meeting at Chester. Their visit took place on Saturday the 25th of July, and they were met by the whole Society at a *Conversazione* in the Town Hall. The apartments and lights were granted by His Worship the Mayor, Vice-President *ex officio*.

The laying of the foundation stone of the Free Public Library and Museum, appeared to be a fitting occasion for a learned Society of the district to express its views on the subject. For this purpose the President and members attended at the Town Hall, and

presented an Address to William Brown, Esq. They had the further gratification of seeing that the announcement of their intention had induced other public bodies to follow their example.

The Annual Excursion during the past summer was to the Art Treasures' Exhibition at Manchester. A brief notice of the proceedings on that occasion, and of the other Special General Meetings, will be found in the Appendix to Volume IX.

The Council feel it their duty to put upon record, an expression of the very efficient manner in which Mr. Rundell has discharged the duties of Assistant Secretary. He has however found, that a continued attention to them would interfere with his convenience, and closes his labours this evening. In these circumstances the Council have appointed as his successor Mr. J. H. Genn.

The gentlemen who have been nominated to take the places of those who retire, have all shewn great interest in the business of the Society, and are ready to undertake such duties as you may confide to them.

It was then moved by P. R. M'QUIE, Esq., seconded by W. L. STROUD, Esq., and resolved unanimously :—

That the Report now read be adopted, and printed and circulated with the Proceedings of the Society.

The following Statement of Accounts by the Treasurer having been read,

It was moved by DAVID BUXTON, Esq., seconded by G. MANSFIELD BROWNE, Esq., and resolved unanimously :—

That the Treasurer's Statement of Accounts be passed, and printed and circulated with the Proceedings of the Society.

THE HISTORIC SOCIETY OF LANCASHIRE AND CHESHIRE, *in Account with*
Dr. THOMAS AVISON, *Treasurer.* Cr.

Dr.	£	s.	d.	Cr.	£	s.	d.
THE VOLUMES:—				Balance from last account	39	11	0
Printing part of vol. viii..	£1	16	0	Receipts, Session ix:—			
Printing & binding vol. ix.	143	1	0	Arrears	22	1	0
Lithographing.....	22	13	6	Entrance fees, Session ix.....	49	7	0
			167 10 6	Annual subscriptions, do.....	251	9	0
SESSIONAL EXPENSES:—				Do. do. x.	4	14	6
Printing circulars, pro-				Do. do. xi.....	1	11	6
spectuses, &c.....	10	11	6	Life compositions	63	0	0
Stationery.....	0	14	5	Books sold	19	14	6
Insurance, gas, rent and				Donation from C. W. Atkinson,			
taxes	18	19	11	Esq.	5	5	0
Accommodation at meet-							
ings.....	15	15	0				
Refreshments at meetings,							
including conversazione							
at Town Hall	62	13	6				
Advertising meetings, &c.	3	6	7				
Assistant Secretary	50	0	0				
Commission, making up							
accounts, &c.	20	15	4				
Postages, parcels, and mis-							
cellaneous	20	18	9				
			203 15 0				
PERMANENT CHARGES:—							
Printing circulars, &c.....	16	5	0				
Binding books for library..	6	16	10				
Joiners' work at library ..	3	18	0				
Envelopes.....	5	18	0				
Umbrella stand	0	6	6				
Mr. Eyes, for maps, &c.,							
purchased.....	5	7	6				
			38 11 10				
SPECIAL EXPENSES:			32 10 3				
Balance in Treasurer's hands.....			14 5 11				
			£456 13 6				
							£456 13 6

Examined by

PETER R. M'QUIE, } Auditors.
SAMUEL GATH, }

(E.E.)

Liverpool, 19th October, 1857.

THOMAS AVISON.

It was moved by A. J. MOTT, Esq., seconded by THOMAS DAWSON, Esq., and resolved unanimously:—

That the thanks of the Society be given to the Officers and Sectional Members of Council, for their services during the past session.

It was moved by P. MACINTYRE, M.D., seconded by JOSEPH BOULT, Esq., and resolved unanimously:—

That the thanks of the Society be given to the British Association for the Advancement of Science, and to all others who contributed to the illustration of the volume.

It was moved by the Rev. THOMAS MOORE, M.A., seconded by the Rev. A. HUME, D.C.L., and resolved unanimously:—

That the best thanks of the Society be given to Mr. Mayer, for the reception which he gave to the members and their friends at his Museum in November last; also to the Worshipful the Mayor of Liverpool, for his ready assistance in the *Conversazione* of the 25th of July.

A ballot having been taken for the Officers and Sectional Members of Council, the result was announced from the chair. (See page vi.)

Thanks were then conveyed by acclamation to the chairman, for his services during the evening, on the motion of Dr. HUME, seconded by WILLIAM BURKE, Esq.

5th November, 1857. ARCHÆOLOGICAL SECTION.

J. T. DANSON, F.S.S., V.P., in the Chair.

The following donations were presented:—

From the Society. Proceedings of the Society of Antiquaries of Scotland, vol. ii, part i, 4to.

From the Society. Bulletin de la Société Archéologique de l'Orléanais, No. 25.

From the Society. Proceedings and Papers of the Kilkenny and South East of Ireland Archæological Society, (N.S.) vol. i, No. 8.

From the Institute. The Archæological Journal, No. 53, March, 1857.

From the Author. Collectanea Antiqua, by Charles Roach Smith, F.S.A., vol. v, part i.

From the Author. "The Irish, who are they?" by B. Donbavand.

From the Author. Two Lectures on the Lancashire Dialect, by the Rev. W. Gaskell, M.A.

From the Author. Two Essays on Spinning and Weaving, with Incidental Notices of Allied Subjects; illustrative specimens; and a Poem, by the Rev. A. Hume, D.C.L.

The following objects of interest were exhibited:—

By the Rev. Dr. Hume. (1) A triturating stone, used before hand-mills were employed, and still in use in Central America and South Africa. (2) The lower stone, or "ass" of a quern. (3) The upper stone, or "rider" of another. (4) A coloured lithograph, shewing two Highland women at work at the quern. Dr. Hume mentioned that these stones had been presented to him by Mr. Welsh of Dromore, in the north of Ireland, a gentleman who possesses a large collection of primitive stone implements.

The following Paper was then read:—

OUR MOTHER TONGUE IN OUR FATHER LAND,* by David Buxton, M.R.S.L.

* Transactions, p. 37.

12th November, 1857. LITERARY SECTION.

H. A. BRIGHT, B.A., in the Chair.

The minutes of the last meeting were read and confirmed.

The following donations were presented :—

- From the Society. The Quarterly Journal of the Geological Society, No. 52, November 1st, 1857.
- From the Society. Journal of the Statistical Society, vol. xx, part 2; list of Fellows of the Statistical Society.
- From the Society. Proceedings of the Liverpool Architectural and Archæological Society, vol. iii, part 3.
- From the Author. Annals of the Wars of the 18th Century, by Major-General the Hon. Sir Edward Cust, D.C.L., President of the Society, vol. i.
- From the Author. Essay on Ships' Compasses, by Thomas Allan, Esq.
- From the Author. Remarks on the Mechanical Structure of the Cotton Fibre, by Gilbert J. French, Esq.
- From the Author. The Liverpool Guide, by James Stonehouse, Esq.
- By Exchange. (Mr. Herdman.) Ancient Liverpool, (N.S.) part iv.

The following objects of interest were exhibited :—

- By the Chairman. An autograph letter of the late Rajah Rammohun Roy; also a translation of the "Creed of the Ancient Brahmins," published in 1833.
- By the Rev. Dr. Hume. A Hindoo schoolmaster's pen—a simple reed—varnished and ornamented with a spiral strip of gilt paper. Also a portion of an Ethnological Map of the County Down: it will contain, when complete, the surnames in the county, laid down in the localities in which they are respectively prevalent.

The following Paper was then read :—

ON THE IMPORTANCE OF THE STUDY OF THE ENGLISH LANGUAGE, ESPECIALLY IN CONNECTION WITH COMPARATIVE GRAMMAR, *by the Rev. A. Hume, D.C.L.*

19th November, 1857. SCIENTIFIC SECTION.

P. R. M'QUIE, Esq., in the Chair.

The minutes of the last meeting were read and confirmed.

The following donations were presented :—

- From the Society. Proceedings of the Royal Geographical Society of London, No. 8, March, 1857.
- From the Society. Journal of the Geological Society of Dublin, vol. vii, part 4, 1857.
- From the Society. Quarterly Journal of the Geological Society, vol. xiii, part 2, No. 50, May, 1857.
- From the Author. "Lord Palmerston and the Isthmus of Suez Canal," by D. A. Lange, 1857.
- From W. H. Grimmer, Esq., through Mr. Buxton. The names of the Roman Catholics, Non-Jurors and others who refused to take the oaths to His late

Majesty King George, with their Titles, Additions, and Places of Abode, &c., taken from an original MS. of a gentleman who was the principal clerk to the Accountant-General's office. Now first published with a generous view to promote and serve the true Protestant interest of these kingdoms, 1 vol. London, 1745.

The following objects of interest were exhibited:—

By the Rev. Thomas Moore, M.A. An ethnological map, by the Rev. Dr. Hume, giving the arrangement of surnames in the county of Antrim, accompanied by a descriptive article, published in a recent number of the *Ulster Journal of Archæology*. Also an Ethiopian spoon, carved with a pocket-knife, and a primitive object in bronze, the use of which is unknown. By some it is supposed to have been one of several studs upon a shield; by others to have been an article of horse-furniture, in connection with the bit of a bridle.

The following Paper was then read:—

ICEBERGS IN THE SOUTHERN OCEAN,* *by J. T. Towson, F.R.G.S.*

3rd December, 1857. ARCHÆOLOGICAL SECTION.

JAMES KENDRICK, M.D., in the Chair.

The minutes of the last meeting were read and confirmed.

The following gentlemen were duly elected members of the Society:—

Percival Berry, 7, Union court.
 Charles Henry Chadburn, 71, Lord street.
 William Fairbairn, F.R.S., President of the Manchester Literary and Philosophical Society, Manchester.
 Rev. R. W. Gleadowe, M.A., Neston Vicarage, Cheshire.
 Rev. Francis Grosvenor, B.A., St. John's, Chester.
 William Moulton, 21, Leigh street, and Knowsley.
 Rev. Richard R. Moore, B.A., 28, Rupert lane, Everton.
 Frederick Oxley, 21, Acre terrace, Everton.
 Hugh Shimmin, 21, North John street.

The following donations were presented:—

From John Gray Bell, Esq., Manchester. A collection of thirteen gutta percha casts of seals, from documents in the donor's possession.
 From the Society. Transactions of the Surrey Archæological Society, 1854-5, vol. i, part 1.
 From the Society. Bulletin de la Société Archéologique de l'Orléanais, No. 26.
 From the Society. Proceedings and Papers of the Kilkenny and South East of Ireland Archæological Society, vol. i, No. 9.
 From the Society. Journal of the Architectural, Archæological and Historic Society of the County and City of Chester, part iv.
 From the Society. Transactions of the Ossianic Society, 1855, vol. iii.
 From James Boardman, Esq. A copy of the pedigree of the family of Greenhalgh of Brandlesome, Lancashire.

The following objects of interest were exhibited:—

By the Chairman. Two early British torques of gold; fragments of a torque and

* Transactions, p. 239.

bracelet of electrum, and of three horses' bits in bronze, all found in Lincolnshire; also an equestrian figure of a knight, in brass, used as a vessel for holding liquids, probably of the latter part of the twelfth century; a fragment of a green glazed earthenware equestrian figure, used for the same purpose,



probably of the early part of the twelfth century, dug up in the church yard of Winwick, Lancashire, and now in the Warrington Museum. He also exhibited a fragment of a similar vessel dug up in Warrington, of about the same probable date as the previous specimen; and a large bronze celt and ring, recently found at Warrington Junction, on the Liverpool and Manchester Railway.

Three beautifully-executed coloured drawings of the more remarkable of the foregoing objects, were likewise exhibited by Dr. Kendrick.

By R. W. Anderson, Esq. A volume dated 1787, called "The Cabinet of Genius," containing various poems popular in the last century, profusely illustrated with engravings in aqua-tint.

The Chairman announced that the Warrington Free Library and Museum was now open, and invited members of this Society visiting that town to inspect it.

The following Paper was then read:—

DESCRIPTION OF SOME ANTIQUITIES FROM MACON, IN THE SOUTH OF FRANCE,*
by Mr. H. Ecroyd Smith.

* Transactions, p. 165.

10th December, 1857. LITERARY SECTION.

J. T. DANSON, F.S.S., V.P., in the Chair.

The minutes of the last meeting were read and confirmed.

The following gentlemen were duly elected members of the Society :—

Rev. William Calder, M.A., Fairfield.
Benjamin Donbavand, 5, Chatsworth street, Edge Hill.
Thomas S. Hancock, Birkenhead.
John R. Hughes, Laverock bank, Toxteth Park.
Major Egerton Leigh, High Leigh, Warrington.
Rev. Canon James Slade, M.A., West Kirby, Cheshire.
William Wardell, Abbotsfield, Chester.

The following donations were presented :—

From the Society. Transactions of the Liverpool Chemists' Association, for 1856-7.
From the Society. Journal of the Statistical Society of London, vol. xx, part 3.
From the Author. Report on the Establishment and present Condition of the Liverpool Public Baths and Wash-houses, by James Newlands, C.E., Borough Engineer, 1856.
From the Author. On the Banners of the Bayeux Tapestry, by Gilbert J. French, Esq.
From Joseph Mayer, Esq. Catalogue of Assyrian and other Antiquities formed by B. Hertz, now in the donor's possession.
By Exchange. (Mr. Herdman.) Ancient Liverpool, (N.S.) part v.

The following objects of interest were exhibited :—

By D. Buxton, Esq. An early edition of "Essays and Counsels, Civil and Moral, of Sir Francis Bacon, enlarged by the Honourable Author himself." London, 1668.
"A Help to English History, &c." By P. Heylin, D.D. London, 1674.
An illustrated Vocabulary for the use of the Deaf and Dumb. London, 1857.
By the Council. Hardwick's Illustrated History of Preston.

The following Paper was then read :—

ON THE POPULATION OF LANCASHIRE AND CHESHIRE, AND ITS LOCAL DISTRIBUTION DURING THE FIFTY YEARS 1801-51,* by J. T. Danson, F.S.S., V.P., and T. A. Welton, F.S.S.

17th December, 1857. SCIENTIFIC SECTION.

JAMES STEAINS, Esq., in the Chair.

The minutes of the last meeting were read and confirmed.

The following gentlemen were duly elected members of the Society :—

Thomas Darnley Anderson, 5, India buildings, Water street, and West Dingle, Toxteth Park.
Thomas Bradley, Bold street, and 18, Kenyon terrace, Birkenhead.
William Gibson Bradley, Bold street, and 18, Kenyon terrace, Birkenhead.

* Transactions, p. 1.

Rev. W. H. Coates, West Kirby, Cheshire.
 Ivie Mackie, Mayor of Manchester.
 Sir James Watts, late Mayor of Manchester.

The following donations were presented :—

- From the Society. Report of the Proceedings of the Geological and Polytechnic Society of the West Riding of Yorkshire, 1856-57.
- From the Author. Inquiry into the Opinions of the Commercial Classes of Great Britain on the Suez Ship Canal, by Ferdinand de Lesseps.
- From the Society. Proceedings of the Royal Geographical Society of London, parts 9 and 10, 1857.
- From the Society. Monthly Notices of the Royal Astronomical Society, from November, 1855, to July, 1856, vol. xvi; Memoir of ditto, half vol. xxv, 1855-56.

The following objects of interest were exhibited :—

- By Mr. Bean. Eighty-five species of rare British plants, collected and arranged by himself.
- By Mr. Gregson. A specimen of the *Heliopobus hispidus*, captured by Mr. Reading of Plymouth; a box of *Tineidæ* illustrative of his Paper; and a drawer of *Coleoptera* from his cabinet.

The following Paper was then read :—

ON THE LEPIDOPTERA OF THE LIVERPOOL DISTRICT, part iv,* by Mr. Charles Stuart Gregson.

7th January, 1858. ARCHÆOLOGICAL SECTION.

P. R. M'QUIE, Esq., in the Chair.

The minutes of the last meeting were read and confirmed.

The following gentlemen were duly elected members of the Society :—

Charles Batten, 87, Lord street, and 74, Chatham street.
 Wilbraham Egerton, Rostherne Hall, Knutsford.
 Meadows Frost, Exchange alley West, and Chester.

The following donations were presented :—

- From the Society. Mémoires de la Société des Antiquaires de Picardie, second series, vol. iv. 1856; Documents Inédits, vols. iii and iv, 1855-56; Bulletins, 1854, No. 2; 1855, Nos. 1, 2, 3; 1856, Nos. 1, 2, 3, 4; 1857, Nos. 1, 2.
- From the Society. Report to and Proceedings of the Cambridge Antiquarian Society, No. 7, May, 1857.
- From the Society. Proceedings and Papers of the Kilkenny and South East of Ireland Archæological Society, vol. i, (N.S.) No. 10.
- From the Society. Plates viii and ix (omitted,) for insertion in vol. vii, part 4, of the Journal of the Geological Society of Dublin.
- From Edward Heath, Esq., V.P. A variety of pamphlets, comprising
 The Liverpool Magazine, Nos. 1, 2, 3.
 Financial Reform Tracts, Nos. 17, 18, 19, 20, 21 (N.S.).

* Transactions, p. 113.

Town Dues and Currency. By John Finch, Merchant.
Report on Town Improvements, 1853; &c.

The following objects of interest were exhibited :—

By Mr. Burke. A snuff-box, made from the oak which formed part of the original foundations of the old Stockwell Bridge at Glasgow, built by Bishop Rae about 1345, in the reign of King David, son of Robert the Bruce; taken down 1850.

By Mr. Oxley. A copy of Lily's Christian Astrology, 1647.

By Mr. A. Craig Gibson. A copy of an advertisement, dated 1787, by John Dalton the philosopher and his brother, announcing their intention to open a boarding school in Kendal.

The following Paper was then read :—

ON ANCIENT CUSTOMS AND SUPERSTITIONS IN CUMBERLAND,* by *A. Craig Gibson, Esq.*

14th January, 1858. LITERARY SECTION.

J. T. DANSON, F.S.S., V.P., in the Chair.

The minutes of the last meeting were read and confirmed.

The following donations were presented :—

From the Author. Annals of the Wars of the 18th Century, vol. ii, by the Hon. Sir Edward Cust, D.C.L., Major-General in the British Army.

From Joseph Boulton, Esq. Cobbett's Parliamentary Debates, 1806. Notices of the Cholera Morbus, 1831. Inquiry into the Origin of the Liverpool Town Dues, 1857. Right of the Bishops to sit and vote in the House of Peers, 1833. Address to the Addressers, by T. Paine, 1792. Journal kept in the British Army, from the landing of the troops under command of Earl Moira at Ostend, in June 1794, to their return to England the following year: Liverpool, 1796. Correspondence between Sir Robert Wilson and the Duke of York and the Electors of Southwark: London, 1821. Letter to the Right Hon. Spencer Percival on the return of Lord Melville to power, 1810. Address of President Jefferson on his Election, 1801. Household Suffrage, by the Editors of the Leeds Mercury, 1841. Brief Notes on Dr. Arnold's "Principles of Church Reform," by Lant Carpenter, LL.D. Catalogue of the Liverpool Medical Library, 1823.

From Mr. T. T. Wilkinson, Burnley. The Lady's and Gentleman's Diary for 1858.

From Mr. George Jones, of London, through Mr. Boardman. Etching of an ancient house in Blackwall, said to have been the residence of Sir Walter Raleigh.

From Mr. James Boardman. Engraving of a monument to Nelson, near Knotty Ash road, Old Swan.

From Mr. Hamilton Williams, Croft Vicarage, Boston. Copy of the Croft Brass.

From the Rev. John Sansom, B.A., Vicar of Buslingthorpe. Copy of the Buslingthorpe Brass.

The following objects of interest were exhibited :—

By Mr. T. Sansom. The Greenock News-Clout, Nos. 9 and 15; a news-letter printed on calico in 1848, with the object of escaping the stamp duty on News-papers.

* Transactions, p. 97.

The Queen's Matrimonial Ladder; a pen and ink copy from the original publication by Hone, illustrated by George Cruikshank, 1820.

By Mr. Burke. A copy of a Glasgow edition of *Hudibras*, with illustrations by Martin, 1747. A copy of a London edition of the same poem, "with cuts by Mr. Hogarth," 1761. A copy of Kirke White's "Remains," including the third volume, little known. "The Pitman's Pay and other Poems," in the dialect of the Newcastle colliers, by Thomas Wilson, 1843. The Poetical Works of Thomson, before the corrections suggested by Pope, 1738. The first fifteen and part of the sixteenth Books of *Euclid*: Frankfort, 1607.

By Mr. Donbavand. Seven engravings produced in America, five by native artists, and two by Mr. Alfred Jones, formerly of Liverpool.

By Dr. Macintyre. Two Saxon Coins of the reign of King Edgar, found at Chester in 1857.

The following Papers were then read:—

AZIMUTH CARD FOR THE LATITUDE OF LIVERPOOL,* *by Mr. W. W. Rundell.*

NOTES ON THE BUSLINGTHORPE BRASS,+ *by the Rev. John Sansom, B.A., and*

THE ROMAN OCCUPATION OF LANCASHIRE AND CHESHIRE, *by Thomas Baines, F.S.A.*

21st January, 1858. SCIENTIFIC SECTION.

THOMAS SANSOM, A.L.S., in the Chair.

The minutes of the last meeting were read and confirmed.

The following donations were presented:—

From the Society. Proceedings of the Royal Society, Nos. 26 and 27.

From the Society. Proceedings of the Royal Geographical Society, No. 11.

From the Society. Proceedings of the Royal Society of Edinburgh, vol. iii; Transactions, vol. xxi.

From the Committee. First and Second Reports of the Liverpool Compass Committee, 1855-56.

The following objects of interest were exhibited:—

By Mr. James Boardman. A £1 note of 1804.

By the Chairman. A collection of sea-weeds from Pembrokeshire.

By Mr. Potter, through Mr. Burke. A piece of insulated wire, discovered by Capt. C. S. Knight amongst the rocks below Kertch, when the allies took possession of the forts and city. One end was attached to a galvanic battery; the other was cut away and lost. It is believed to have been used for firing infernal machines. Also, a piece of the Atlantic Telegraph Cable, to shew the difference in the manufactures.

By Mr. Donbavand. A specimen of copper ore from Alderley Edge, Cheshire, found in the *new* red sandstone. It is supposed that no specimen is to be found elsewhere in Great Britain in the same stone. Also a piece of copper ore from the *old* red sandstone, Ireland.

The following Paper was then read:—

ON THE FLORA OF PRESTON AND ITS NEIGHBOURHOOD,† *by Mr. C. J. Ashfield.*

* Transactions, p. 111.

† Transactions, p. 203.

‡ Transactions, p. 143.

4th February, 1858. ARCHÆOLOGICAL SECTION.

PETER R. M'QUIE, Esq., in the Chair.

The minutes of the last meeting were read and confirmed.

The following donations were presented:—

From the State Historical Society of Wisconsin, U.S.A. The History of the State of Wisconsin; vol. i, Historical; vol. iii, Documentary.

From the Society of Antiquaries, London. Archæologia; or, Miscellaneous Tracts relating to Antiquity, vol. xxxvi, part 2; vol. xxxvii, part 1. Proceedings of the Society, Nos. 43, 44, 45, 46. Lists of Fellows for 1856-57.

From the Society. Original Papers, published under the direction of the Norfolk and Norwich Archæological Society, vol. v, part 2.

From the Editor. The Archæological Mine, edited by A. J. Dunkin, Esq., part 36.

From Hugh Neill, Esq., Liverpool. Address to the Graduates of the Medical Department of Pennsylvania College, 1857, by Alfred Stillé, M.D. The Unity of Medicine, 1856, by the same. Annual Announcement of the Medical Department of Pennsylvania College, Philadelphia, Session 1857-58. Report of the Board of Managers of ditto, 1856. Report of the Pennsylvania Hospital for the Insane, by Thomas Kirkbride, M.D., 1856. A Discourse, reviewing a ministry of fifty years, by the Rev. W. Neill, D.D., Philadelphia, 1857. A Tribute to the principles, virtues, habits and public usefulness of the Irish and Scotch Early Settlers of Pennsylvania. By a Descendant, 1856.

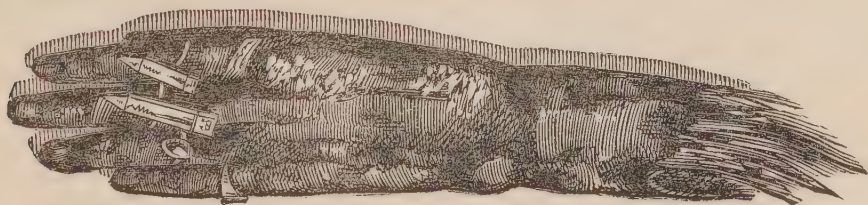
From David Lamb, Esq. The Athenæum for 1857.

From Joseph Mayer, F.S.A. A volume of vocabularies, illustrating the condition and manners of our forefathers, as well as the history of the forms of elementary education and of the languages spoken in this island from the tenth century to the fifteenth: edited from MSS. in public and private collections, by Thomas Wright, M.A., F.S.A., &c., 1857; being the first of a series Mr. Mayer is about to publish on English Antiquities.

From the Authors, through Mr. Hughes. On Wrought Iron in large masses, by William Clay, Esq., Liverpool, 1857. The British Kymry; or Britons of Cambria, by the Rev. R. W. Morgan, P.C., Tregynon.

The following objects of interest were exhibited:—

By Joseph Mayer, F.S.A. The hand of a female mummy, remarkable from having



four rings on the fingers; one of plain gold, with a trumpet-shaped head, on the little finger; a scarabæus of lapis-lazuli, with a gold shank, on the third; and on the middle and fore fingers two very large obelisks, the shafts formed of lapis-lazuli, the apex of each being of plain gold, and the bases of the same, but delicately worked with filagree. These are the only specimens of obelisk-rings hitherto discovered. Also, a waistband which was wrapped round the body of the mummy seven times; it is about six inches broad at one end, tapering gradually to about two inches wide at the other, and is finished by the ends of the threads being tied into an ornamental plait. The material is cotton, and the pattern of the weaving extremely beautiful, being

formed of the flower of the full-blown lotus, with a stem and leaves composing the edge, within which are a sort of egg and dart, with portions of circles. These ornaments run on the outer edges of both sides, and down the centre is a plain piece, of the graduating form of the whole, with plain lines of red colour on each side, the other ornaments being coloured blue and yellow. Altogether it is a most beautiful piece of work, and displays well the extraordinary perfection at which the art of weaving had arrived in Egypt at that time. Both specimens were found at Memphis, and brought to this country by the Rev. H. Stobart. They now form part of Mr. Mayer's Museum.

By John Topping, Esq., (Executor of the late Samuel Winstanley, Esq.) A plaque of gold, nearly an inch and a half long by an inch and an eighth wide, engraved with the subject of the Adoration of the Magi. On the left is Mary seated, with a crown on her head surrounded by the nimbus, and on her knee is standing the infant Jesus, also nimbed. On the right are the three kings, one of whom is kneeling before the Virgin and Saviour, and in the background stands Joseph. Over the figures is represented the roof of a thatched building, with a small window in it; and above, on the field of the tablet, are stars, in the midst of which is the star of Bethlehem, larger than the rest; at the left is the moon, and at the right the sun in splendour. This object is thought to have been part of a reliquary, of the date of about the fifteenth century.



By Mr. Jacob. A curious silver watch, of London manufacture, by Buckingham; shewing the sun in the dial during the day, and the moon and stars during the night. A pocket almanack, in ivory case, of the year 1758. A silver fish jointed, of fine manufacture. A gilt fish. The last two articles were formerly used for containing sweetmeats. Gold medals of Pope Clement XII, William II, Henry I, Edward IV, Henry IV, William III, Mary II, George II, English Sovereigns, and the last Earl of Bridgewater.

By Mr. Bean. Sixteen coins, principally of silver, comprising a styca of Redulf, King of Northumbria, 844, &c.

The following Papers were then read:—

REMARKS ON THE ARTICLES ERRONEOUSLY STYLED RING-MONEY, by *William Bell, Ph.D.*, and

ON THE SO-CALLED ANGLO-SAXON ANTIQUITIES DISCOVERED NEAR KERTCH, IN THE CRIMEA,* by *C. Roach Smith, F.S.A.*, &c.

11th February, 1858. LITERARY SECTION.

HENRY A. BRIGHT, B.A., in the Chair.

The minutes of the last meeting were read and confirmed.

Arthur Shute, 89, Vine street, was duly elected a member of the Society.

The following donations were presented:—

From the Society. Reports of the Smithsonian Institution of Washington, U.S.A., for 1855-56.

Smithsonian Contributions to Knowledge, 1855-56.

* Transactions, p. 59.

Publications of Learned Societies, and Periodicals, in the Library of the Smithsonian Institution, parts 1 and 2.

By Exchange. (Mr. Herdman.) Ancient Liverpool, (N.S.) part vi.

From the Society. Proceedings of the Literary and Philosophical Society of Liverpool, 1857.

From the Society. Journal of the Statistical Society, vol. xx, part 4.

From the Rev. Dr. Hume. Documents connected with the Public Banquet given to William Brown, Esq., M.P., at St. George's Hall, Liverpool, on the 15th of April, 1857. Documents and Proceedings connected with the donation of a Free Public Library and Museum by William Brown, Esq., M.P., to the Town of Liverpool.

From the Author. The Parochial System; and the Clerical Year: by a Lancashire Incumbent.

From the Author. On the Marriage and Intermarriage of the Deaf and Dumb, by David Buxton, M.R.S.L.

The following objects of interest were exhibited:—

By the Chairman. A volume containing ten Tracts, including a Report of Sacheverell's Trial, dated 1710, &c., and bearing the autograph signature and notes of H.R.H. the late Duke of Sussex.

By James Boardman, Esq. A copy of the *breeches* Bible, 1599. London.

By the Rev. R. Brook Aspland, M.A. An interleaved Bible, containing many MS. notes, made in the 17th century, by John and Samuel Angier, Dukinfield. The oath of allegiance proved to be non-obliging. And, The Quakers Confuted. By Samuel Eaton, Teacher of the Church of Christ at Dukinfield. The Haven of Health. By Thomas Coque of Dukinfield. London, 1596.

The following Paper was then read:—

DUKINFIELD, A CHESHIRE VILLAGE IN THE OLDEN TIME, *by the Rev. R. Brook Aspland, M.A.*

18th February, 1858. SCIENTIFIC SECTION.

DAVID BUXTON, M.R.S.L., in the Chair.

The minutes of the last meeting were read and confirmed.

Henry Thompson, 151, Upper Parliament street, and 11, North John street, was duly elected a member of the Society.

The following donations were presented:—

From the Society. Memoirs of the Literary and Philosophical Society of Manchester, (N.S.,) vol. xv. Dalton's Meteorology, 1 vol., and New System of Chemistry, part 1, vols. i and ii.

From the Society. Quarterly Journal of the Geological Society, vol. xiii No. 51.

From the Society. Proceedings of the Royal Society, vol. ix, No. 28.

From the Author. Two Essays, extracted from the Philosophical Transactions, by the Rev. T. P. Kirkman, A.M., F.R.S.

From the Author. Plan of a Breakwater for improving the Port and Harbour of Liverpool, by George Rennie, C.E., F.R.S.

From the Society. Journal of the Society of Arts, vols. iv and v; vol. vi, Nos. 261 to 273.

From R. C. Carrington, Esq., Redhill Observatory. A catalogue of 3735 circumpolar stars, printed at the public expense, by order of the Lords of the Admiralty. Also, ten charts of circumpolar stars.

From John Williams, Esq., Assistant Secretary to the Royal Astronomical Society. Two beautiful engravings of Saturn and Jupiter, as seen through a large equatorial.

From Mr. Boardman. Roscoe's Poem on the Dingle.

The following objects of interest were exhibited :—

By Mr. Hancock. A MS. of John Locke.

By Mr. Guyton. A locust found near Liverpool.

By Mr. T. Comber. A book, partially eaten by the Brazilian white ant.

By Mr. Donbavand. Three letters of the late Richard Robert Jones, the Welsh linguist.

By Mr. Gregson. Specimens of Coleoptera from his own collection.

By Mr. T. Sansom. Leeuwenhoek's *Arcana Naturæ*.

By Mr. Boardman. A copy of Brindley's Plan of his proposed Canal to unite the Trent and Mersey.

By Mr. T. J. Moore. Specimens from the Liverpool Free Public Museum, of horns, shells, &c. of animals, (some of which are extinct,) discovered in the excavations at Wallasey for the Birkenhead new docks; exhibited by favor of the Library and Museum Committee of the Town Council.

The following Papers were then read :—

ON THE DIPTEROUS INSECTS OF THE DISTRICT AROUND LIVERPOOL,* *by the Rev. H. H. Higgins, M.A.*

ON THE MICROSCOPE AS APPLIED TO NATURAL HISTORY,+ *by Thomas Sansom, A.L.S., F.B.S.E.*

NOTICE OF MAMMALIAN REMAINS DISCOVERED IN THE EXCAVATIONS AT WALLASEY FOR THE BIRKENHEAD NEW DOCKS,† *by Mr. Thomas J. Moore, Keeper of the Derby Museum, Liverpool.*

4th March, 1858. ARCHÆOLOGICAL SECTION.

PETER R. M'QUIE, Esq., in the Chair.

The minutes of the last meeting were read and confirmed.

The Lord Lindsay, of Haigh Hall, was duly elected a member of the Society.

The following donations were presented :—

From the Archæological Institute. The Archæological Journal, No. 54, 1857.

From the Society. Proceedings and Papers of the Kilkenny and South-East of Ireland Archæological Society, vol. i, (N.S.,) Nos. 11 and 12.

From the Society. Bulletin de la Société Archéologique de l'Orléanais, No. 27, 1857.

From the Society. Transactions of the Wisconsin State Agricultural Society, for 1852-53.

* Transactions, p. 199.

† Transactions, p. 255.

‡ Transactions, p. 265.

From the Author. The Law of Treasure-Trove, by A. H. Rhind, Esq.

By Exchange. (Mr. Herdman.) Ancient Liverpool, (N.S.,) part vii.

The following objects of interest were exhibited :—

By the Chairman. Hollingworth, his Chronicle of Manchester.

By Mr. Mayer. A superb royal quarto volume, containing plans and descriptions of the recent improvements in the Castle of Alnwick, and illustrations of the more interesting features of the Castles of Prudhoe and Wardour; the gift to the exhibitor of His Grace the Duke of Northumberland.

A medal struck by Wyon in commemoration of the marriage of the Princess Royal with Prince Frederick William of Prussia.

A series of sketches of glass vases. A large vase of terra-cotta, (black clay,) subject, dogs pursuing hares, the animals in high relief; it is a specimen of the article usually called Rhine-ware. A large bronze lamp; a long chain of bronze set with glass beads; several surgical instruments; fibulæ; a torque; and other objects, whose use is not now known. The whole of the above were found in graves near the Roman Station called *Mars-field*, at Cologne.

By Dr. Macintyre. Orthodox Paradoxes. By Ralph Venning, 1657.

The Glory of their Times; or, the Lives of the Primitive Fathers, 1640.

Antiquities of Sefton Church, by R. Bridges.

A large quarto volume of fac-similes of autograph letters of distinguished persons of various times and countries, published at Stuttgart in 1846.

Billing's Liverpool Advertiser, 21st October, 1805; and other local newspapers of about the same date.

Several silver coins in fine preservation, and of high antiquity, including a tetradrachm of Philip ii. of Macedon, about 340 B.C.; a didrachm of Tarentum, about 200 B.C.; and a tetradrachm of Athens of an early date.

A piece of one of the old windows of Sefton Church, remarkable for having two coats of arms cut out of the enamel with which the panes are coloured.

A curious emblematic medal in lead, date 1458; and one of the Emperor Charles V, in the same material.

By Mr. H. Ecroyd Smith. A personal seal in pewter, probably of the 14th century, inscribed "Willi de Meles," found at high-water mark near the village of Great Meols.

A buckle of the 17th century, found on Hilbre Island.

By John Peacock, Esq., Chester. Specimens of mediæval pottery, consisting of two tigs or drinking-cups, one of a rare type, having six handles, of Elizabethan black-ware, the other of the usual yellow-ware; three unguent pots; a large-sized olla; the neck of a vessel of pale yellow-coloured Roman ware; and a piece of Samian ware. Also, three fibulæ; two coins of Tetricus, one junior, the other senior; a coin of Crispina in brass; a brass of Victorinus, and another of Constantine. All the above were discovered during some excavations now making in Eastgate street, Chester.

On the suggestion of Mr. Towson, a Committee was appointed to make arrangements with one of the Railway Companies. to enable members to proceed to some convenient station for witnessing the Eclipse on Monday, the 15th instant.

The following Paper was then read :—

FURTHER REMARKS ON THE HISTORY OF THE TWO COUNTIES, AND ITS MATERIALS,*
by John Robson, M.D.

11th March, 1858. LITERARY SECTION.

JOSEPH MAYER, F.S.A., &c., in the Chair.

The minutes of the Special General† and Ordinary Meetings of the 4th instant were read and confirmed.

The following donations were presented :—

- From the Society. Journal of the Statistical Society of London, vol. xxi, part 1.
- From the Author. An Essay on the Beneficent Distribution of the Sense of Pain. By G. A. Rowell.
- From the Liverpool Watch Committee. Report on the Police Establishment and State of Crime in Liverpool, for the year ending 29th September, 1857.
- From the State Historical Society of Wisconsin, U.S.A. The Madison Directory. 1855. The Milwaukee Directory, 1856-57. Map of Milwaukee in 1856. Township Map of the State of Wisconsin. Map of Madison and the Four-Lake Country. Plan of ditto. First Annual Report of the Executive Committee of the Society, 1855. Second Annual Report and Collections of the Society, vol. ii, 1855. Annual Report of the Geological Survey of Wisconsin, 1856. Also, various pamphlets descriptive of the more important cities, towns and institutions of the State of Wisconsin.
- From the Author. The Manchester Hand-book. By Joseph Perrin.
- From the Author. A comparative table of the principal schemes for the classification of libraries and of human knowledge generally. By Edward Edwards.
- From C. Roach Smith, F.S.A., &c. Thornberg's Cufic Coins. Upsula, 1848.
- From Hugh Neill, Esq. A map of the course of the eclipse of the 15th instant, prepared by the Royal Astronomical Society.
- From the Author. The Stream of Time; a chronological chart of Universal History. By William Bell, Ph.D.

The following objects of interest were exhibited :—

- By Mr. Donbavand. Specimens of bog iron ore, in four stages of progress: first, in the form of brown oxyde, in decomposing mica rock; secondly, as an alluvial deposit, that is, as a clay-like deposition from water; thirdly, the same in another state of oxydation, and become somewhat granulated; fourthly, as compact bog ore. In the third stage the oxyde is employed as a dye by the people who live on bogs in which it occurs.
- By Mr. Albert J. Mott. Essay on Man, first part, first edition. The copy used by Pope himself, with his autograph corrections for the second edition, containing the two "memorable alterations" spoken of by Johnson.
 - The original MS. of Johnson's Life of Pope, with early illustrative engravings and autograph letters, &c.
 - An original portrait of Dr. Johnson, not engraved, supposed to be by Osias Humphrey, R.A.
 - Le vite degli illustri filosofi de Diogene Laertio. Venice, 1545.
 - The will and testament of Basil Valentine, with curious mystical engravings. London, 1671.
 - Of the Nature of Things, &c. By Paracelsus. London, 1650.
- By Major-General the Hon. Sir E. Cust, President. An illustrated pedigree of the family of Ireland of Hutt; and one of the family of Whitmore, formerly of Thurstaston Hall.

† Proceedings, p. 355.

The following Paper was then read :—

NOTES ON THE CLASSIFICATION OF HUMAN KNOWLEDGE, WITH ESPECIAL REFERENCE TO THE METHODS WHICH HAVE BEEN ADOPTED, OR PROPOSED, FOR THE ARRANGEMENT OR CATALOGUING OF LIBRARIES,* *by Edward Edwards, Esq.*

18th March, 1858. SCIENTIFIC SECTION.

P. MACINTYRE, M.D., in the Chair.

The minutes of the last meeting were read and confirmed.

The following donations were presented :—

- From the Society. Journal of the Society of Arts, vol. vi, Nos. 274 to 277 inclusive.
- From the Publisher. The Illustrated Inventor, Newspaper, No. 20.
- From the Society. Proceedings of the Royal Society. vol. ix, No. 28.
- From the Society. Quarterly Journal of the Geological Society, vol. xiv, part 1, No. 53.
- From the Society. Proceedings of the Royal Geographical Society, vol. ii, No. 1.
- From the Society. Journal of the Geological Society of Dublin, vol. vii, part 5.
- From Charles Corey, Esq., V.P. Liverpool Photographic Society. The Photographic Journal, vols. i, ii, and iii, in one, for 1854-55-56.
- From Dr. Macintyre. The Academic, a Liverpool Periodical for the year 1821.

The following objects of interest were exhibited :—

- By Mr. Traer. Four human eyes, taken from a cemetery used by the ancient inhabitants at Arica, South America.
- By Mr. Forrest. A lens for photographic purposes, by Voigtländer and Son, on Petzwahl's principle.
An American patent solar camera.
A stereoscopic view of Dr. Livingstone's steam launch, photographed by Mr. Glover.
- By Charles Corey, Esq. Numerous beautifully-executed specimens of the art of photography.
Several photographic illustrations of Egyptian and Nubian antiquities, taken by Frith, were exhibited, magnified by the hydro-oxygen lens, the subjects being commented on by the Rev. H. H. Higgins, M.A.

The following Papers were then read :—

ON THE SOLAR ECLIPSE OF MARCH 15TH, 1858, AS SEEN AT BURNLEY,+ *by T. T. Wilkinson, F.R.A.S.*

ON THE SOLAR ECLIPSE OF MARCH 15TH, 1858, AS SEEN NEAR OXFORD,† *by J. T. Towson, F.R.G.S., and T. Sansom, A.L.S.*

A HISTORICAL SKETCH OF PHOTOGRAPHY,|| *by Charles Corey, Esq.*

* Transactions, p. 61.

† Transactions, p. 233.

‡ Transactions, p. 231.

|| Transactions, p. 183.

15th April, 1858. MISCELLANEOUS MEETING.

REV. J. S. HOWSON, M.A., V.P., in the Chair.

[This meeting was held in the Theatre of the Royal Institution. It differed from the other ordinary meetings only in the presence of ladies, and a larger number of visitors than usual.]

The minutes of the last ordinary meeting were read and confirmed.

The following gentlemen were duly elected members of the Society:—

Thomas Chaloner, 26, North John street, and College street South.

William Davies, Lyceum place, Bold street, and Ladycroft cottage, Huyton.

The following donations were presented:—

From the Author. *Annals of the Wars of the 18th Century*, vol. iii, by Major-General the Hon. Sir E. Cust, D.C.L., President of the Society.

From the Author. *Synopsis of the British Rubi*, with two supplements. *Flora Bathoniensis*. *Primitiæ Flora Sarnicæ*, with two supplements, by C. C. Babington, M.A.

From the Society. *Proceedings of the Royal Society*, vol. ix, No. 29.

From the Institute. *Journal of the Archæological Institute*, No. 55, 1857.

From the Designer. An engraved azimuth card for the latitude of Liverpool, by W. W. Rundell, Esq.

The following Paper was then read:—

ON THE MANCHESTER ART TREASURES' EXHIBITION,* by George Scharf, jun., F.S.A., &c.

6th May, 1858. ARCHÆOLOGICAL SECTION.

JAMES KENDRICK, M.D., in the Chair.

The minutes of the Special General† and Miscellaneous Meetings of the 15th ult., were read and confirmed.

The following gentlemen were duly elected members of the Society:—

J. R. Jago, 26, Upper Huskisson street.

J. D. Mercier, Church street.

The following gentlemen, composing the late Liverpool Photographic Society, were announced as having become members of the Society by the Act of Union completed at the Special Meeting held on the 15th ultimo:—

John Atherton, 33, Manchester street.

F. Ayrton, Chatham street.

Christopher Bell, Back goree.

J. R. Berry, James street.

A. R. Bewley, Temple court.

Rev. T. B. Banner, Orphan School, Myrtle street.

Anthony Bowers, Vauxhall Foundry.

Charles Corey, 5, Slater street.

A. Cooke, 8, Temple court.

Robert Cooke, Liscard.

J. T. Foard, Church street.

* Transactions, p. 269.

† Proceedings, p. 357.

J. A. Forrest, Lime street.
 J. Harding, H.M. Customs.
 Charles Jones, Bridge street, Birkenhead.
 Daniel Jones, 2, Tarleton street.
 J. R. Isaac, Castle street.
 W. Keith, 34, Castle street.
 H. F. Leithead, H.M. Customs.
 H. Lafone, 87, Northumberland terrace, Everton, and 113, Marybone.
 J. M'Innes, 21, Neptune street.
 N. Mercer, 7, Church street.
 J. Newlands, C.E., Public Offices, Cornwallis street.
 Joseph Stevens, 166, Park road.
 James Eden, Park road.
 John Glover, 26, Hanover street.
 J. B. Moss, Minshull street.
 R. Rathbone, Woodcote, Aigburth.
 J. M'Nicoll, Brunswick Saw Mills.
 J. N. Sadler, Public Offices, Cornwallis street.
 George Thomas, Lord street.
 Adam Burgess, 47, South John street.
 Rev. F. Locket, LL.B., Swainswick, Bath.
 John Fawcett, Ashton-under-Lyne.
 J. P. Taylor, Cockermouth.
 J. O. Gulliver, 23, Fishgate street, Swansea.
 Thomas Brown, Egremont, near Whitehaven.
 C. Fowler, Torquay, Devon.
 W. Rowlandson, Kendal.
 H. Mawdsley, Southport.
 J. Lewthwaite, Hartlepool.
 J. Ralstone, Argyle street, Glasgow.
 Rev. W. J. E. Rooke, Tunstal Vicarage, Lancaster.
 Henry Bath, Swansea.
 John Hickson, Stanton-by-Dale, near Landsacre, Derbyshire.

The following donations were presented :—

- From the Society. Bulletin de la Société Archéologique de l'Orléanais, No. 28, 1857.
- From the Society. Mémoires de la Société des Antiquaires d l' Ouest, 1856.
- From the Society. Proceedings and Papers of the Kilkenny and South-East of Ireland Archæological Society, vol. ii, (N.S.) No. 13.
- From the Institute. Journal of the Archæological Institute, No. 56, 1857.
- From the Author. Parochial History of Enstone, Co. Oxford, by the Rev. John Jordan, Vicar of Enstone.
- From the Editor. A History of Northumberland, containing a General History of the County under the Roman, the Saxon, and the Danish Kings, part i, edited by J. Hodgson Hinde, Esq.
- By Exchange. (Mr. Herdman.) Ancient Liverpeol, (N.S.) Nos. viii and ix.
- From T. T. Wilkinson, F.R.A.S., Burnley. A lucky stone, worn by a Lancashire farmer, being a nodule of flint, with an apparently natural hole through it.
- From Mr. James Boardman. Prospectus of the Manx Society for publication of National Documents of the Isle of Man.
- From the Society. Programm und Statut des Historischen Vereins für Niedersachsen. Statistik der im königreiche Hannover vorhandenen heidnischen denkmäler. Alphabetisches verzeichniss der bibliothek des Historischen Vereins für Niedersachsen. Sechste nachricht über der Historischen Verein

für Niedersachsen. 7e @ 15e and 17e @ 20e ditto ditto. Urkundenbuch, ditto ditto. Archiv, ditto ditto. Zeitschrift, ditto ditto.

The following objects of interest were exhibited :—

By the Council. Memoirs, chiefly illustrative of the History and Antiquities of Northumberland, communicated to the Archæological Institute of Great Britain and Ireland at Newcastle-on-Tyne in August, 1852, 2 vols. 8vo.

By Mr. C. Hardwick, Preston. Two Roman second brass coins; one Nerva, one Hadrian, found at the Roman Station, Walton-le-dale, during the present year. A Roman second brass of Claudius, procured at, and probably found near, Preston.

By James Kendrick, M.D., Warrington. The upper stone of a large quern, found at Latchford, near Warrington.

An embroidered band and buckle, worn in ladies' hats during part of the last century; and a copy of Raven's thumb almanac, for 1684; the property of Mrs. Pickton, of Warrington.

By Mr. J. R. Hughes. A MS. volume, containing a collection of the genealogies of the Welsh noble families, dating from a very early period.

The following Papers were then read :—

EL SAKHRA,* *by Major-General the Hon. Sir Edward Cust, D.C.L., President of the Society.*

ON SOME RUNIC INSCRIPTIONS FOUND IN CARLISLE CATHEDRAL, *by A. Craig Gibson, Esq.*

FURTHER DISCOVERY OF REMAINS AT THE ROMAN STATION, WALTON-LE-DALE, NEAR PRESTON, *by Charles Hardwick, Esq.*

After enumerating some additional specimens of Roman Pottery, and other remains found at Walton-le-dale, generally resembling those described in his former paper (vol. VIII., p. 127,) Mr. Hardwick says:—

“The most interesting fact in connection with the recent discovery at Walton is the locality in which the remains were deposited. In my previous paper I gave a sketch, from a modern reprint, of a map published in 1738, by Robert Porter. The course of the Ribble appears, on the whole, to be pretty carefully marked, but that of the Darwen has evidently been merely sketched in, and not really surveyed. This is proved to be the case by the Ordnance map, on which the remains of the old channel are depicted from actual measurement.

“The recent excavations were made in Mr. Crozier's garden, about 130 yards south west of the ‘plump,’ (see vol. VIII., map facing p. 127,) and outside what has hitherto been regarded as the Roman enclosure. It is not improbable that a ditch originally extended from the Darwen to the Ribble in such a direction as would give to the Station the usual form of a Roman Castrum, and include within the natural and artificial trenches all the remains yet discovered.

“The recent discoveries not only confirm the previous evidences of the Roman occupation of Walton, but indicate that occupation to have been of a permanent and important character.

“This fact strengthens the position advanced in my recently published ‘History of Preston and its Environs,’ that Walton is the site of the Roman Station *Coccium*, and that the route of the tenth Iter of Antoninus passed from Maryport along the coast by Egremont, Muncaster, Dalton, Lancaster, Preston, Wigan and Warrington to Middlewich, and not through the hilly country, as conjectured by the two Whitakers and others.”

* Transactions, p. 131.

13th May, 1858. LITERARY SECTION.

EDWARD HEATH, Esq., V.P., in the Chair.

The minutes of the last meeting were read and confirmed.

The following donations were presented :—

- From T. B. Ryder, Esq. Journal of the Manchester and Liverpool Agricultural Society, containing a *resumé* of the past ten years' proceedings.
- From Mr. Charles Hardwick, Preston. Quarterly Magazine of the Independent Order of Odd-Fellows, Manchester Unity, No. vi, April, 1858.
- From the Society. Proceedings of the Royal Society, vol. ix, No. 30.
- From the Society. Journal of the Society of Arts, Nos. 278 to 285 inclusive.
- From Thomas Wright, M.A., F.S.A. Anciens témoignages historiques, relatifs à la Boussole ; note lue à la Société de Géographie de Paris dans sa Séance du 19 Février, 1858, par M. D' Avezac, Président de la Commission Centrale.
- From the Society. Mémoires de la Société Impériale d' Emulation d' Abbeville, 1852 à 1857, 1 vol.

The following Papers were then read :—

FURTHER MEMORIALS OF THE LATE J. H. SWALE,* by T. T. Wilkinson, F.R.A.S., &c.
ON THE GEOLOGY OF THE FYLDE DISTRICT,† by the Rev. W. Thornber, B.A.

20th May, 1858. SCIENTIFIC SECTION.

MAJOR-GENERAL THE HON. SIR EDWARD CUST, D.C.L., &c., PRESIDENT, in the Chair.

The minutes of the last meeting were read and confirmed.

The following donations were presented :—

- From the Royal Dublin Society. Plan of Examinations to be held by the Society, with the view of awarding certificates of merit.
- From James Kendrick, M.D., Warrington. On mediæval vessels in the form of knights, pamph.
- From the Society. Memoirs, vol. xxvi, and Notices, vol. xvii, of the Royal Astronomical Society.
- From the Society. Journal for 1847, and Proceedings, vol. ii, No. 2, of the Royal Geographical Society.
- From the Society. Quarterly Journal of the Geological Society, vol. xiv, part 2, No. 54.
- From the Society. Proceedings of the Somersetshire Archæological and Natural History Society, for 1856-57.
- By Exchange. (Mr. Herdman.) Ancient Liverpool, (N.S.) part x.
- From the Author. Substance of two Lectures delivered at Walton-on-the-Hill, entitled "Knowledge ; Health and Happiness ; Fire and Water." By Henry Johnson, M.R.C.S. Eng.
- From the same. Catalogue of the Arundel MSS., 1 vol. 8vo.

* Transactions, p. 169.

† Transactions, p. 187.

From Joseph Mayer, F.S.A. Sur la Construction des Salles dites des Géants. Par S. M. le roi Frédéric VII de Danemark ; mémoire lue à la Séance des Antiquaires du Nord, tenue au palais de Christiansborg le 29 Mai, 1857. Pamph.

From Mr. James Boardman. Copy of the Supplement to the "Liverpool Mercury" for the 11th May, 1858, containing a letter from the donor, on the Liverpool Library.

The following objects of interest were exhibited :—

By Joseph Mayer, F.S.A. A male skull, found in the ancient cemetery of Stanlow, in Cheshire. It is remarkable for the great amount of animal power, and the smallness of the intellectual regions ; also for the extraordinary protuberance of the eyebrows, which hang far over the face, and must have given the monk a most forbidding look.

By Thomas Sansom, A.L.S. A number of rare botanical specimens from Brazil.

By Mr. How, (London.) Four specimens, of different sizes, of Voigtländer's orthoscopic lenses, said to be of superior value in photographic operations ; with some pictures on iodized wax-paper, taken by the description of lens exhibited.

By the Rev. Dr. Hume. An ecclesiastical and moral chart of the Borough of Liverpool, prepared by him for a Special Committee of the House of Lords, and laid before them on the 14th instant. The basis on which it is constructed is the large and beautiful map recently published by Messrs. Phillip and Son, of South Castle street, containing an area of 32 square feet. Reserving the civil divisions of parish and townships, Dr. Hume shews all the ecclesiastical districts in the borough, indicating every place of religious worship by a distinctive colour. The schools for the education of the poor are indicated in the same way, including those which are not connected with any religious body. By a series of plain symbols, the number and nature of church agents in each district are shown, with certain details respecting each ; from lists which were furnished by the relieving officers, all the streets are marked in which out-door relief is currently or specially administered ; and similar lists, supplied with equal kindness by the authorities at the central police-office, shew the haunts of crime and immorality. Mr. Crews, of the Coroner's Court, has also furnished a list of the principal scenes of death by violence, for further completing the objects of the chart. A series of contour-lines mark the successive increments of building and population for the last two centuries ; and, in a few instances, the migration of churches, chapels and charitable institutions is traced.

The Honorary Secretary announced the gross number of members to be 546, including 31 honorary and *ex officio* members ; and that he purposed carrying into effect his previously expressed intention of resigning his office in the Society when the number of members should have reached 500, at the close of the year. This intimation was made to a very numerous assemblage of members, and was received with general expressions of regret.

J. T. Danson, Esq., V.P., remarked on the great value of Dr. Hume's services, and urged the members present to unite in requesting the rev. gentleman to reconsider his intention, which suggestion having been enforced in addresses by Edward Heath, Esq., V.P., and the President, Dr. Hume consented to continue his services for a further period.

The following Paper was then read :—

ON SLAVERY, AS IT EXISTED IN ENGLAND DURING THE SAXON ERA, AND THE SUBSTITUTION OF VILLENAGE AFTER THE NORMAN CONQUEST, UNTIL ITS GRADUAL EXTINCTION,* by Joseph Wright, Esq.

* Transactions, p. 207.

APPENDIX.

4th March, 1858. SPECIAL GENERAL MEETING.

REV. THOMAS MOORE, M.A., in the Chair.

The Chairman having read the notice convening the meeting, and stated its objects ;—

It was moved by the Rev. Dr. Hume, seconded by Thomas Sansom, A.L.S., and resolved unanimously :—

That this meeting agree to the proposal of Union with the Liverpool Photographic Society on the terms submitted, viz. :—

- I.—That the Photographic Society become part of the Historic Society, *i.e.*, that it accept the name and laws of the latter.
- II.—That the number of Sections as fixed by the present Laws be not increased; but that communications on Photography be admissible at all the ordinary meetings.
- III.—That a Photographic Committee be appointed annually at the commencement of the session, like the committees for Printing, Finance, the Library, &c.
- IV.—That it be allowable for the Authors to print Papers on Photography in anticipation of the Annual Volume of Transactions, at the discretion of such Committee.
- V.—That the property of the Photographic Society become the property of the Historic Society, and that the members of the Photographic Society be enrolled without Entrance Fee.
- VI.—That the Union date from the 31st March, 1858, if the preliminary arrangements be complete by that time.

The alteration of the Law regulating the distribution of the Society's Annual Volume, recommended by the Council, having been discussed; it was moved by the Rev. Dr. Hume, seconded by Albert J. Mott, Esq., and resolved unanimously :—

To omit from the connexion in which they now stand in the sixteenth Section of the Laws, the words "to receive the Society's Publications, or," and to insert after the words "proceedings of the Society," the following sentence—"and no member whose subscription for the current Session is unpaid shall be entitled to receive the Society's publications." *

6th April, 1858. EXTRA MEETING.

CONVERSAZIONE AT THE MUSEUM OF BRITISH AND FOREIGN ANTIQUITIES,
COLQUITT STREET.

By the invitation of the proprietor, Joseph Mayer, Esq., F.S.A., an extra meeting was held here, when upwards of four hundred members, and ladies and gentlemen, their friends, attended.

* Law XVI, in accordance with the above resolution, now provides as follows :—

"From the first day of March in each Session, the Treasurer shall exhibit publicly in the meeting-room a list of the Society, on which shall be marked opposite each member's name, the date when his annual subscription was paid, or the amount of all arrears due. No member, whose subscription is in arrear *for any but the current Session*, shall be entitled to take any part in the proceedings of the Society; and no member, *whose subscription for the current Session is unpaid*, shall be entitled to receive the Society's publications. The Treasurer shall also prepare a complete Statement of Accounts, to be audited at the stated Annual Meeting of the Council."

The company occupied themselves for some time in inspecting the resources of the Museum, and after having partaken of refreshment, provided by the liberality of Mr. Mayer, assembled about nine o'clock in one of the lower rooms, when Mr. Alderman S. Holme proposed a vote of thanks to Mr. Mayer for the gratification he had conferred upon them by throwing open to them his splendid collection. Our rulers ought to have anticipated Mr. Mayer in purchasing much of it for the nation at large; but it was a pleasing feature of the times that men of science came forward to do what our governors, in the multitude of their avocations, neglected to do for the nation. It was by the sagacity, foresight and public spirit of Mr. Mayer that the collection they had had the pleasure of inspecting had been thrown open to them. He felt sure he was only anticipating the feelings of every one who heard him in proposing on behalf of his fellow-townsmen their cordial thanks for the rich intellectual treat Mr. Mayer had that evening conferred on them.

The Rev. Dr. Hume spoke with the same feeling of thanks in the name of the members of the Historic Society of Lancashire and Cheshire. There was a time when archæology had been sneered at, but that day had passed by, and its usefulness was now generally acknowledged. After specifying some of the leading objects of antiquity in the museum, he said that their history would give an insight into the habits and manners of the people who had passed over the countries in which they were found, thus affording a vast amount of valuable information otherwise unattainable.

Mr. Thomas Wright, M.A., F.S.A., claimed on the part of the visitors and strangers, to join to those which had preceded his tribute of gratification with the proceedings of that evening. The books of history which, thirty or forty years ago, were received with implicit faith, were now looked upon with incredulity. The reason was, that during those thirty or forty years people had been employed in investigating the contemporary records of former times, instead of resting satisfied with accounts written by persons who naturally gave a colouring to facts, derived from their own prejudices and opinions. With regard to the records seen in that and similar collections, their colouring was their own, and what those records told them must be faithful.

The motion was put by Mr. Alderman Holme as a matter of form, and carried by acclamation.

Mr. Mayer, who was received by the company with the most enthusiastic applause, then delivered an address, of which the following is a brief abstract:—

Ladies and Gentlemen,—I am glad of this opportunity of offering you my sincere congratulations on the determination of our fellow-inhabitants to establish in this town a library for the people. It is an act which will redound to our honour. It is only in public libraries that we can expect to meet with works on the higher branches of human philosophy, or science, or mechanical construction. How many biographies have we read wherein men have recorded their regrets that their studies had been retarded for want of knowing what others had written on the subject of their inquiries. It has been decreed that a museum shall be attached to the library. This is truly wise, for many branches of inquiry have need of a museum of comparative and illustrative objects. Amid such truths as are just now disclosing themselves so rapidly around us, I conceive no man would dare say there are few who are interested in the study of antiquity. Those young men who would now be thought liberally educated must not confine themselves to the mere reading of Latin and Greek, but must add to those valuable acquirements general knowledge. I thank you for the honour you have conferred on me personally by your attendance here this evening, but I feel still more pleasure in thinking you are honouring the good cause of education and study.

The proceedings then terminated, and the company dispersed.

15th April, 1858. SPECIAL GENERAL MEETING.

JOHN POOLE, Esq., in the Chair.

The Chairman read the notice convening the Meeting, and stated its object.

It was moved by the REV. DR. HUME, seconded by ALBERT J. MOTT, Esq., and resolved unanimously:—

That the proposal of Union of the Liverpool Photographic Society with the Historic Society of Lancashire and Cheshire be finally confirmed, on the terms recorded in the minutes of the Special General Meeting held on the 4th ultimo.

14th July, 1858. SPECIAL GENERAL MEETING.

EXCURSION TO CHESTER.

On Thursday, the 14th July, the Annual Excursion of the members and their friends took place. The party, consisting of a large number of ladies and gentlemen, visited Chester, leaving Liverpool at a quarter to eleven, a. m. They were met at the Chester Station by the Lord Bishop of Chester, Sir Philip de Malpas Grey Egerton, Bart., M.P., the Rev. F. Grosvenor, Mr. W. H. Ayrton, and other gentlemen, members of the Chester Archæological Society, and proceeded in the first instance to St. John's Church, through which they were conducted by the Rev. Mr. Marsden, the Rector, and the Rev. Mr. Grosvenor: the latter gave a short historical and architectural account of it, describing the changes it had undergone, and relating the various interesting legends of which it is the subject. The Priory adjoining was next visited, after which, at the invitation of Mr. Meadows Frost, the party repaired to that gentleman's house and partook of a slight refectation. On proceeding to the Cathedral they were met by the Rev. Canon Eaton, and under his guidance inspected the Lady Chapel, the Chapter House, the Cloisters and Crypts, and the Free Grammar School. A short visit was next paid to the Church of St. Mary-on-the-hill.

At three o'clock the whole party assembled at the Savings' Bank, in the board room of which they partook of a cold collation. Edward Heath, Esq., V.P., presided, and several sentiments having reference to the progress of archæology, literature and science, having been proposed and suitably responded to, the party resumed their inspection of the various objects of antiquarian interest for which Chester is celebrated, including the Roman Bath in Bridge Street, the Walls, &c.; assembling at the Episcopal Palace, on the hospitable invitation of the Bishop, when tea and other refreshments were dispensed. After a day of great interest and enjoyment, the excursion party returned to Liverpool by railway in the evening.

The objects of the excursion were greatly assisted by the Lord Bishop and the Clergy of the Cathedral and City, and by Messrs. Hicklin, Hon. Secretary, Ayrton, Hughes and other members of the Chester Architectural and Archæological Society.

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